



**2012
VIRGINIA
STATEWIDE COMMUNICATIONS
INTEROPERABILITY PLAN
(SCIP)**



Office of the Governor

COMMONWEALTH of VIRGINIA

Terrie L. Suit
Secretary of Veterans Affairs
and Homeland Security

January 1, 2012

Greetings,

I am pleased to provide to you the 2012 Commonwealth of Virginia Statewide Communication Interoperability Plan (SCIP). This is the eighth version of the SCIP and it represents the Commonwealth's continued commitment to the public safety practitioner community. The 2012 SCIP marks the next step towards achieving the 2015 Vision for interoperable communications at the local, regional, state, and federal level.

The Office of Veterans Affairs and Homeland Security (OVAHS) and the State Interoperability Executive Committee (SIEC) collaborated to refine and enhance the SCIP in compliance with Virginia Code Section 2.2-232. This code section requires the annual update and implementation of the SCIP. As a result of the updates for 2012, you will find both new and ongoing interoperability initiatives.

In 2011, the SIEC and additional local, regional, and state practitioners represented the public safety community, drove the planning process, and played an integral role in the implementation of the initiatives contained in the 2012 SCIP. In 2012, we will continue to work with public safety organizations and state agencies to increase awareness, and address interoperability challenges while implementing a clear pathway to achieve interoperable communications by 2015.

As we move towards our goal of interoperability, we must remain dedicated and continue to improve our ability to communicate among disciplines and across jurisdictional boundaries. With help from public safety practitioners statewide, we will work to achieve our 2015 Vision and continue to be a model for statewide interoperability.

Sincerely,

Terrie Suit
Secretary of Veterans Affairs and Homeland Security

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1. New Approach

INTEROPERABILITY

The Department of Homeland Security (DHS) defines interoperability as the ability of public safety agencies to talk across disciplines and jurisdictions via radio communications systems, exchanging voice and/or data with one another on demand in real time, when needed, and as authorized.¹ This is the definition for interoperable communications that has been adopted by the Commonwealth since 2005. While this definition of interoperability continues to generate much debate in Virginia, it is important to recognize that Virginia is mandated by the Statewide Communications Interoperability Plan (SCIP) to be interoperable by July 1, 2015.

“By 2015, agencies and their representatives at the local, regional, state, and federal levels will be able to communicate using compatible systems, in real time, across disciplines and jurisdictions, to respond more effectively during day-to-day operations and major emergency situations.”

The Virginia Code further mandates that stakeholders across the Commonwealth must comply with the Statewide Communications Interoperability Plan in order to remain eligible for state or federal communication grants and funds.

§ 2.2-232

“All state agencies and localities shall achieve consistency with and support the goals of the statewide interoperability strategic plan by July 1, 2015, in order to remain eligible to receive state or federal funds for communications programs and systems.”

In addition, the Code grants the Statewide Interoperability Coordinator (SWIC) the authority to review all communications-related grant requests to ensure the requests support the SCIP.

§ 2.2-231

“Designate a Commonwealth Interoperability Coordinator to review all communications-related grant requests from state agencies and localities to ensure federal grants are used to enhance interoperability and conduct the annual review and update of the statewide interoperability strategic plan as required in §2.2-232.”

¹ Virginia adopted and utilizes the Department of Homeland Security's definition of interoperability found at <http://www.safecomprogram.gov/interoperability/Default.aspx>.

This year the Statewide Communications Interoperability Plan is focused on providing a clear vision and pathway to meet the 2015 interoperability requirement. In October, 2011, Governor Robert McDonnell issued Executive Order 41, which illustrated the need for a strategic vision and a path toward achieving interoperable communications. Governor McDonnell stated,

*"I continue to authorize the Secretary of Veteran Affairs and Homeland Security in collaboration with any other executive branch agency deemed to be appropriate, to create, devise, and disseminate an annual preparedness assessment for executive branch agencies... in order (to) gauge the overall level of preparedness in the following major areas of emphasis; physical security, continuity of operations planning, information technology security, document protection, human resources, preparedness, training, and **interoperable communications**. The purpose of conducting such assessments shall be to identify deficiencies in these major preparedness areas of emphasis and to devise solutions to address those areas of needed improvement."*

It is now time, in 2012, to take a new approach to achieving interoperability in the Commonwealth. Given the economic challenges the nation and Virginia are experiencing, it is imperative that an overarching plan is developed to achieve the 2015 interoperability vision. As funding sources are reduced or eliminated, coordination of interoperable goals, as well as equipment purchases, will be necessary. Stakeholders across the Commonwealth have spent the past year outlining the barriers and solutions to interoperability across the state. Together, these partners have developed **Seven Lanes to Interoperability** that outline a comprehensive strategic approach to achieving the 2015 interoperability requirement. The stakeholders will continue to focus on the nuances of interoperability while moving forward, using the Seven Lanes to Interoperability to ensure that public safety agencies and responders can talk to each other, in real time, using common language, during an incident anywhere in the Commonwealth.

LEADER PARTNERS IN INTEROPERABILITY

The Commonwealth of Virginia continues to work with many partners as it moves toward its 2015 interoperability goal. Among those partners is SAFECOM, a Federal program managed by the Department of Homeland Security. SAFECOM works with its federal partners to provide research, development, testing and evaluation, guidance, tools, and templates on communications-related issues to local, tribal, state, and Federal public safety agencies. Through this partnership, the Commonwealth adopted the SAFECOM practitioner-driven approach to provide a forum for emergency responders to drive statewide planning.

The Statewide Interoperability Governance structure in Virginia ensures that the Statewide Interoperability Communication Plan is stakeholder driven. As reflected in the graphic below (Figure 1), seven Regional Preparedness Advisory Committees for Interoperability (RPAC-I) serve as the basis from which all ideas, proposals, and guidance flows. The Statewide Interoperability Executive Committee (SIEC) receives input from all stakeholders via the Statewide Interoperability Executive Committee Subcommittees which include Policy, Grants, Information-sharing and Technology. The SIEC provides all information gained to the Office of Veterans Affairs and Homeland Security which houses the Interoperability office led by the Statewide Interoperability Coordinator.

To ensure interoperability planning and data collection efforts are closely coordinated with other important agencies in the Commonwealth, the Office of Veterans Affairs and Homeland Security also works closely with, but not limited to:

- The Virginia State Police (VSP)
- The Virginia Department of Emergency Management (VDEM)
- The Virginia Geographic Information Network (VGIN), Public Safety Communications (PSC), sub-agencies of Virginia Information Technologies Agency (VITA), Integrated Service Program (ISP)

Commonwealth of Virginia Interoperability Communications Governance Structure

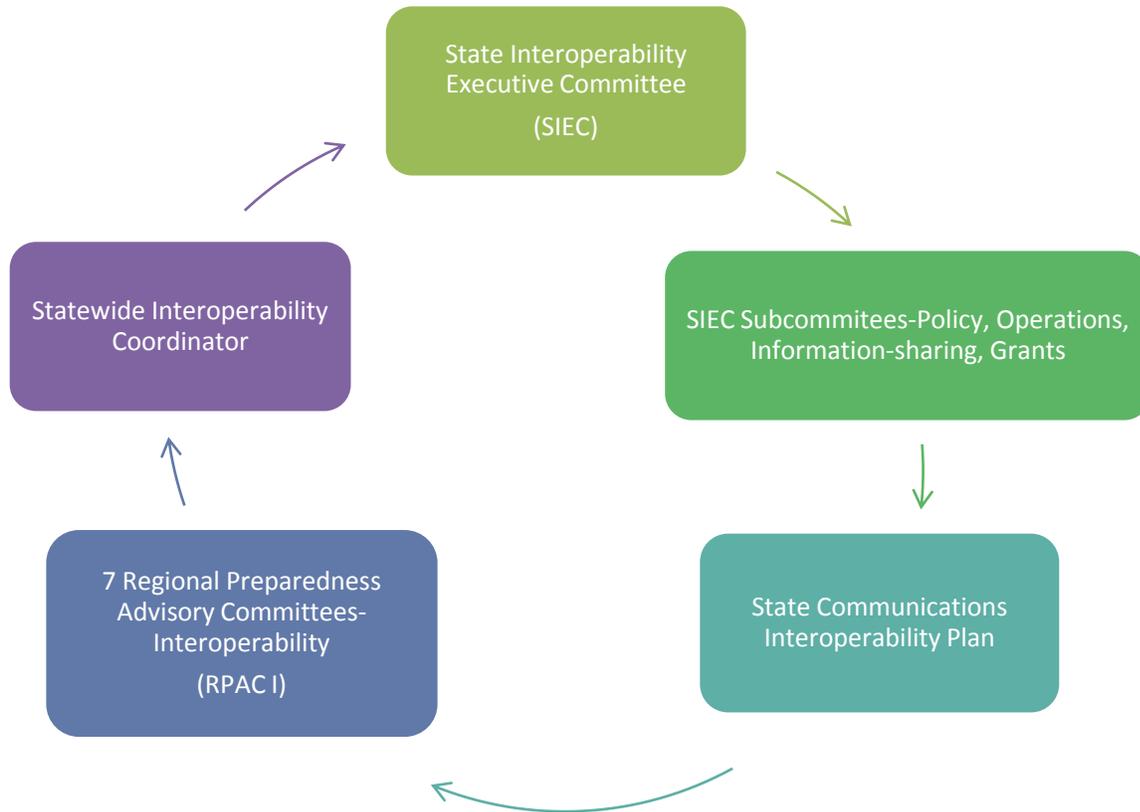


Figure 1: Commonwealth of Virginia Interoperability Communications Governance Structure

THE INTEROPERABILITY CONTINUUM

To assist in improving emergency response communications and interoperability, the Department of Homeland Security (DHS) created the *Interoperability Continuum* (Figure 2) tool. The Commonwealth uses this tool as one of several ways to measure its progress towards interoperability.² The Interoperability Continuum provides a flexible continuum to serve as a guide as jurisdictions move toward achieving true interoperability.

² The *Interoperability Continuum* brochure is available at http://www.interoperability.virginia.gov/pdfs/SAFECOM_Continuum_Brochure.pdf.

Interoperability Continuum

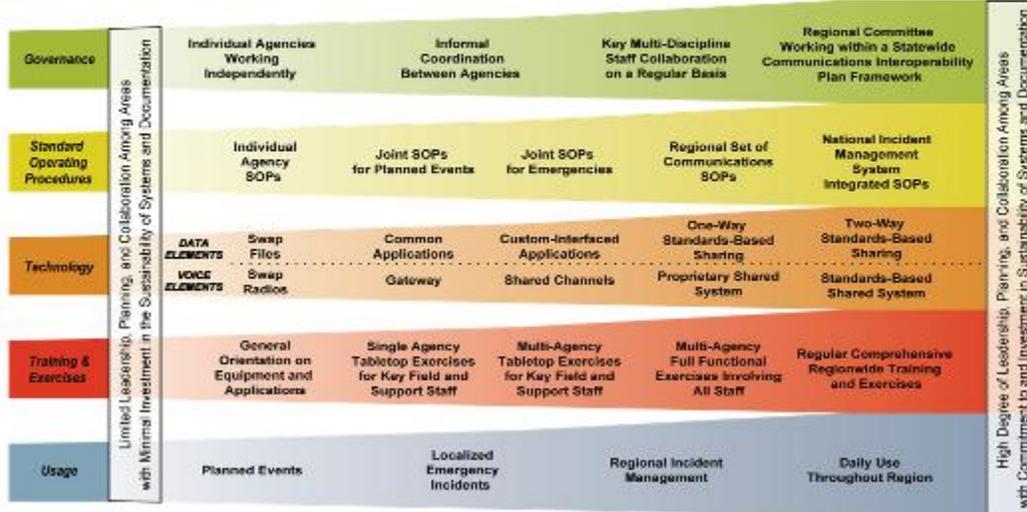


Figure 2: SAFECOM Interoperability Continuum Tool

Overview of the SAFECOM Interoperability Continuum

Governance

Governance efforts enhance, foster, and maintain the interoperability effort in the Commonwealth of Virginia by involving an ever-increasing number of stakeholders in the planning and implementation process. Initiatives and tasks are focused on creating a collaborative and inclusive practitioner-driven process for interoperability decision-making.

Technology

Technology initiatives and tasks focus on coordinating major statewide investments and assets, increasing the ability of stakeholders to respond to major emergencies by establishing clear technical requirements, identifying technological gaps on a regional and state basis, and establishing a funding strategy.

Standard Operating Procedures

Operational protocols are developed to help overcome operational and cultural barriers and improve stakeholder-to-stakeholder communications for day-to-day operations as well as during emergency situations. Additionally, operational requirements are considered for all technology purchases and, whenever possible, initiatives and tasks are focused on forecasting future needs to ensure operational procedures are established prior to purchase.

Training and Exercises

Training and exercises are necessary to provide a standardized definition of interoperability, test existing equipment, and help localities obtain additional grant funds through improved grant writing. By leveraging training plans throughout the state, the initiatives and tasks can be focused on making interoperability a key part of statewide exercises.

Usage

Training, exercises, and outreach will be leveraged to use interoperability equipment regularly, whenever possible. Initiatives and tasks are focused on continued communication with practitioners, especially those that have received funding from the state and must now consider its most effective usage. Outreach efforts bring interoperability information to Virginia's public safety community, elected officials, and other stakeholders such as private and non-profit partners.

The Virginia Office of Interoperability is making use of the SAFECOM Interoperability Continuum to incorporate specific stakeholder-driven objectives and initiatives that align the 2012 SCIP with the Continuum's lanes for interoperability, thereby ensuring a high degree of leadership and collaboration.

2. Statewide Communications Interoperability Plan (SCIP)

PURPOSE AND FRAMEWORK

For years, the Virginia SCIP has provided a vision for regional and local interoperable communications planning. Since 9/11, stakeholders across the Commonwealth have spent over \$650 million dollars on all different types of communication systems. There has not been a strong focus on a centralized strategic planning effort which has led to incompatible systems in neighboring jurisdictions, a deficit in focus on communications planning by local and state emergency agencies, and a minimal, at best, focus on interoperability governance and standard operating procedures.

In today's challenging fiscal environment, such disjointed efforts cannot continue. Federal communication grants have been cut in half. The federal government continues to promulgate unfunded communication mandates that will cost the state millions of dollars. In addition, Virginia is facing the loss of the equivalent of 1.5 Urban Area Security Initiatives (UASI) which provided millions of dollars of funding for interoperable communications systems and equipment. Working together, in 2012, every jurisdiction within the Commonwealth's seven regions and every agency must be clear about how the 2015 Vision will be achieved and sustained.

The Virginia interoperable communications governance structure works to ensure that local, tribal, regional, and state recommendations continue to be the primary drivers of the statewide planning process. To that end, in 2011, the state conducted statewide brainstorming workshops to solicit regionally-based stakeholder input on barriers to achieving interoperability by 2015, the solutions to these barriers and the standards by which implementation of the solutions will be measured. Therefore, in 2012, the Statewide Interoperability Executive Committee has determined that the SCIP should be "operationalized", clearly delineating the goals, objectives, and initiatives for achieving the state's interoperability vision. This framework will ensure the Commonwealth can move forward along the SAFECOM Interoperability Continuum to meet the state's 2015 interoperability deadline.

Mirroring the SAFECOM Interoperability Continuum Lanes, stakeholders across the Commonwealth have worked together to develop a roadmap and the road that the Commonwealth will follow to reach the 2015 interoperable communications destination. This road has Seven Lanes to Interoperability including 1) COMLINC, 2) STARS, 3) Communication Caches, 4) Planning, Training and Exercises, 5) Broadband, 6) Information-sharing and 7) Shared Interoperable Channels and Use of Common Language Protocol. To ensure there is only one pathway to follow, it is necessary that stakeholders across the Commonwealth review and comply with the SCIP.

COMPLIANCE WITH THE SCIP

§ 2.2-232 *“All state agencies and localities shall achieve consistency with and support the goals of the statewide interoperability strategic plan by July 1, 2015, in order to remain eligible to receive state or federal funds for communications programs and systems.”*

Compliance with the SCIP is mandatory in order to qualify for and receive state and federal-distributed grant funding. The Grants Working Group (GWG), SIEC, SWIC, and the Senior Leadership Team are the designated authorities for reviewing interoperable communications funding applications from across the Commonwealth. The SIEC Grants Working Group makes funding recommendations to the SIEC, which then passes its recommendations on to the SWIC. The SWIC also prepares recommendations for the Senior Leadership Team made up of members from both the Virginia Department of Emergency Management and OVAHS. The review process by each group helps determine compliance with grant eligibility requirements, and assesses the application’s alignment with the SCIP.

To comply:

1. Grant requests must support and/or align with the 2012 SCIP.³
2. Applicants must clearly define how the project improves interoperable communications on a multi-discipline and multi-jurisdictional basis and how the project addresses the Seven Lanes of Interoperability.
3. Applicants must clearly define how the project promotes regional cooperation and addresses mutual aid.
4. Applicants must be National Incident Management System (NIMS) certified and compliant.
5. Equipment purchased must be on the Department of Homeland Security’s Grants and Training Authorized Equipment List (AEL) or an exception letter must be on file and approved.
6. Equipment purchases will be monitored by the SWIC and others to support a centralized oversight approach to ensure the solution goals identified in the 2012 SCIP are met and interoperability is achieved or maintained.
7. Subscriber radios purchased must be programmed with mutual aid and the national interoperability channels within that radio’s frequency band. Specifically, all State and National interoperability channels, including but not limited to, 700 or 800 MHz, UCALL/UTAC, VCALL/VTAC, Fireground, EMS and Law Enforcement Channels must be programmed into all radios and must remain in analog mode during use.
8. When procuring equipment for communication system development and expansion, a standards-based approach will be used to begin migration to multi-jurisdictional and multi-disciplinary

³ <http://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+2.2-232>

interoperability. Specifically, all new voice systems will be conceptually compatible with applicable Project 25 (P25) standards⁴ and the COMLINC system.

9. Jurisdictions operating below 512 MHz and not utilizing trunking must retain or have the capability to operate at least one primary Base and/or Repeater in the analog mode within their system.
NOTE—Logic Trunked Radio (LTR) trunking does not qualify as trunking.

SEVEN LANES TO INTEROPERABILITY

Standards for Compliance

In order for the Commonwealth to move forward in its goal of achieving interoperability by 2015, the Seven Lanes to Interoperability have been established as the roadmap that the Commonwealth is going to follow.

1. The Commonwealth's Link to Interoperable Communications (COMLINC) is an integral part of the Commonwealth's strategy for establishing interoperability.
2. The Statewide Agencies Radio System (STARS) is the statewide communication system to be used for interoperability. STARS will be considered for jurisdictions whose local systems are reaching the end of service and are finding replacements to be cost prohibitive.
3. The Commonwealth Strategic Reserve program (Communication Caches) will be supported and sustained by the state.
4. Comprehensive planning and robust training and exercises will maximize the effectiveness and efficiency of the state's interoperability capabilities.
5. All Broadband initiatives will be based on robust regional requirements. Prior to any implementation, business and funding process must be fully developed.
6. Information-sharing initiatives are centered on a developed statewide strategy to ensure coordination across all information management plans and projects.
7. Shared Interoperable Channels and Common Language Protocol will focus on accurately assessing the Commonwealth's existing mutual aid radio assets, identifying gaps in coverage, and developing a plan to mitigate gaps and to ensure existing and future infrastructure can be connected through COMLINC.

LANE 1 - COMMONWEALTH LINK TO INTEROPERABLE COMMUNICATIONS (COMLINC)

COMLINC offers the most cost-effective method for bridging communication barriers by eliminating the incompatibility of existing radio systems through the use of the Statewide Agencies Radio System (STARS) network to interface between local and state agencies and jurisdictions. The COMLINC initiative has grown from its inception in 2005 and now encompasses 93 jurisdictions across the Commonwealth and Virginia's five (5) communication caches (Figure 3). As a result of the investment put forth by localities and agencies, the Commonwealth has determined that COMLINC is "the" state's contribution for interoperability across Virginia. The Commonwealth recognizes that COMLINC has limitations but supports the system as the path to interoperable communications across the state.

⁴ Backward compatibility to Narrowband analog FM or P25 Phase I; or P25 Phase II spectrum efficiency will be essential benchmarks. Pertinent areas of ANSI/TIA 102 standards also will be considered.

Commonwealth's Link to Interoperable Communications (COMLINC)

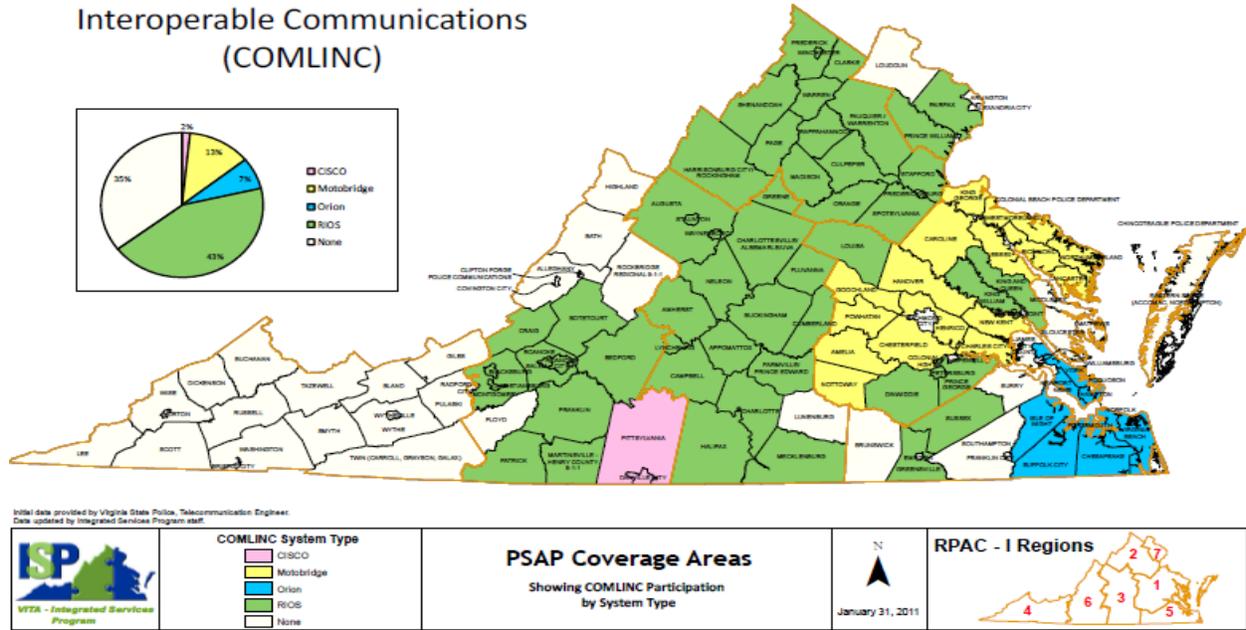


Figure 3: Map of Commonwealth’s Link to Interoperable Communications (COMLINC)

LANE 2- STATEWIDE AGENCIES RADIO SYSTEM (STARS)

The Statewide Agencies Radio System (STARS) provides a multi-channel trunked digital voice and data wireless communication system for the Commonwealth. STARS was designed to meet the specific needs of public safety requirements. Currently, STARS provides 98% coverage of the state including communications for 21 state agencies (Figure 4).

In the current fiscal environment, the Commonwealth must strive to ensure that new radio systems are part of a larger strategic plan which maximizes the utilization of STARS. This will provide an opportunity for local jurisdictions to access the STARS network when upgrading to new equipment in 2012 and in future projects. The Commonwealth also recognizes that the STARS governance structure must be updated to incorporate representation from local users. In 2012, the SWIC will work with stakeholders to lay the groundwork for the expansion of STARS. This effort will include identifying the cost involved, and the governance, financial and programmatic structures that the initiative will require.

LANE 5 - BROADBAND

Broadband provides an unparalleled opportunity for the future of interoperable communications in the Commonwealth. It may result in a secure path for COMLINC, information-sharing initiatives, Public Safety Answering Points (PSAP), and Next Generation 911 (NG911) integration. Broadband will not replace existing Land Mobile Radio (LMR) systems in the foreseeable future, as the cost to implement broadband will be extremely high. A cautious approach to this investment is needed. Therefore, robust requirements and innovative business practices must be developed for Broadband initiatives prior to any implementation. The Commonwealth will work with stakeholders to begin this process in 2012.

LANE 6 - INFORMATION-SHARING

As communication and information opportunities expand with GIS, data and voice communications, CAD, NG911, and video-streaming technologies, the Commonwealth will center information-sharing initiatives on developing a statewide strategy, ensuring coordination across all information management plans and projects. Charlottesville is piloting an information-sharing project that can be expanded across the state. The project will incorporate the development of a comprehensive information management strategic plan for the city, as well as a technology development effort which encompasses an open, integrated, technology-agnostic, information management system design which supports seamless intra-state data interoperability, including spatially-based data, across state information management systems. This year's focus will be on partnering with Charlottesville on the development of a strategic information-sharing plan with a review by statewide stakeholders. Additional details of the project can be found in Appendix G. In 2013, steps will be taken to expand this local effort to a statewide information-sharing effort.

LANE 7 – SHARED INTEROPERABLE CHANNELS AND USE OF COMMON LANGUAGE PROTOCOL

The State Interoperability Executive Committee supports the long-term development of statewide mutual aid radio coverage. In order to move forward, the Commonwealth will focus on accurately assessing the Commonwealth's existing mutual aid radio assets, identifying gaps in coverage, and ensuring there is standardized channel nomenclature. A plan will be developed to mitigate gaps and to ensure existing and future infrastructure can be connected through COMLINC.

To increase statewide interoperability, it is required that all radios are programmed with national and statewide interoperability channels. These channels will be published in the Virginia Department of Emergency Management's *Commonwealth of Virginia Tactical Interoperable Field Operations Guide* in 2012. All State and National interoperability channels, including but not limited to, 700 and 800 MHz, UCALL/UTAC, VCALL/VTAC, VTAC33-38, Fireground, EMS and Law Enforcement Channels must be programmed into all radios as applicable, and must remain in analog mode during use (e.g. VHF users should program VTAC channels). The use of Common Language during all incidents is required. (Appendix F).

3. Strategy

2012 SEVEN LANES TO INTEROPERABILITY OBJECTIVES AND INITIATIVES

Through collaboration and planning with local public safety and emergency response stakeholders, the Commonwealth of Virginia created a Vision designed to help guide communications interoperability efforts and improve interoperability by 2015. The Vision states:

“By 2015, agencies and their representatives at the local, regional, state, and federal levels will be able to communicate using compatible systems, in real time, across disciplines and jurisdictions, to respond more effectively during day-to-day operations and major emergency situations.”

CHALLENGES, SOLUTIONS AND METRICS

During workshops in March, 2011, interoperability communication stakeholders from across the Commonwealth gathered to discuss barriers and challenges to meeting the 2015 interoperability Vision. As the problem statements were defined, the workshops’ participants also developed solutions to the challenges along with metrics to ensure the solutions are implemented. This collaborative work resulted in the framework underpinning the Seven Lanes to Interoperability. The Seven Lanes outline the road Virginia is taking to achieve interoperability. The following challenges, solutions, and metrics “operationalize” the Seven Lanes ensuring the Commonwealth is moving forward to achieve its 2015 interoperability destination. This also will form the basis of determining if a jurisdiction has met the 2015 goal as delineated in the code, and of the interoperable communications assessment stipulated in Executive Order 41.

PROBLEM STATEMENT #1

“We don’t have a definition of communications interoperability or a standard level of communications interoperability at State/Regional levels.”

Solution - 2012 goals to reach 2015 interoperability requirement:

- All jurisdictions and agencies are connected through COMLINC.
- Use of P25 (Phase I) will be defined.
- Use of Common Language is required at all incidents.

Measurement:

- SIEC-Operations Subcommittee will identify and RPAC-I will adopt interoperability performance measures.
- The COMLINC Operational Pilot (COP) will define “operational”.
- All COMLINC jurisdictions and agencies will:
 - Adopt Standard Operating Procedures (SOPs) and Governance.
 - Have a minimum of two trained COMLINC Operators confirmed annually by RPAC-I Chairs.

PROBLEM STATEMENT #2

“We are not well-trained on equipment as we do not use it continually and we are unsure of governance procedures.”

Solution:

- Conduct COMLINC training in every region.
- Conduct COML (operator) training in every region.
- Develop of COMLINC SOP's that are vetted through exercises.

Measurement:

- COML/COMLINC trainings are completed in each region.
- VDEM State Agency Exercise with COML/COMLINC completed (5 Agency minimum).
- Regional COMLINC roll calls, tests, drill and exercises implemented on a quarterly basis.
- VDEM and OVAHS will develop a state communications exercise plan incorporated state radio caches, localities, COML and COMLINC.

PROBLEM STATEMENT #3

“We don't have standardized procurement procedures or timelines.”

Solution:

- Procurement must be requirements-based.
- Existing state contracts shall be used for local contracts as standards and specifications are already developed and support coordination with end use/life-cycle, ensuring the Commonwealth has a comprehensive state view to drive towards the 2015 interoperability goal.
(The state has a new communications contract which provides access to open vendor catalog to purchase any type of equipment).

Measurement:

- All 2012 interoperability communications procurement contracts are submitted via an open state contract providing a review mechanism by VITA to ensure interoperability coordination.
- All Procurement Contract copies must be submitted to the State Interoperability Coordinator for review to ensure interoperability coordination.

PROBLEM STATEMENT # 4

“We can't fully coordinate across agencies (inter-agency) during routine to large emergencies nor respond to others outside of our region.”

Solution:

- Continue promulgation of COMLINC, fielding Region 4 by 2012.
- COMLINC governance structure.
- COMLINC SOPs will be established.

Measurement:

- COMLINC Governance established.
- COMLINC SOPs are developed and promulgated.
- Commonwealth of Virginia Tactical Interoperability Field Operation Guide is aligned with regional FOGs and promulgated.
- All updated EOPs will have Interoperability Annexes.
- Executive Order 41 - State Agency Interoperable Communications Assessment completed.

PROBLEM STATEMENT #5

“We are not prepared for, nor do we have a plan for, communicating when a disaster strikes a major artery or urban area.”

Solution:

- All Regional Interoperable Communications Plans (RICPs) and Tactical Interoperable Communications Plans (TICPs) and TICFOGs will be used for this type of incident.

Measurement

- VDEM will conduct an exercise involving 3 state agencies and 2 regions.
- All Regional Interoperable Communications Plans and Tactical Interoperable Communications Plans will be cross-walked by VDEM to ensure coordination and integration and will be promulgated into the Virginia TICFOG as part of the statewide communications plan. This will be a living document that will continue to grow and be refined through a collaborative process as determined by the SIEC in 2012.

PROBLEM STATEMENT #6

“We don’t have the resources to assess our gaps and implement interoperability solutions at all levels”

Solution:

- Gap analysis is underway or completed in all Regions.
- NECP 2 Goal Survey is part of analysis.
- Regional results of analyses and surveys are visually shared and updated as part of the Commonwealth’s statewide Information-sharing Project.

Measurement:

- VDEM TICFOG.
- Regional survey and analyses data are visually shared and updated as part of the statewide Information-sharing Project.

PROBLEM STATEMENT #7

“We do not have an accurate assessment of the standard mutual aid radio infrastructure in the Commonwealth, which hinders our efforts to ensure interoperability.”

Solution:

- Gap analysis completed in 2012.
- Regional results of analyses and surveys are visually shared and updated as part of the Commonwealth’s statewide Information-sharing Project.
- Determine steps to connect existing and future infrastructure through COMLINC.
- All grant-funded radios are programmed with state and national interoperability channels.
- Ensure TICFOG has standard channel nomenclature listed and the Commonwealth’s policy on using Common Language during incidents.

Measurement:

- Gap Analysis is completed.
- Regional results of analyses and surveys are visually shared and updated as part of the Commonwealth’s statewide Information-sharing Project.
- The plan to connect existing interoperable communications structures through COMLINC has been completed and approved by SIEC.
- VDEM’s statewide exercise will have to ensure that mutual aid radios are programmed with the state and national interoperability channels, using standard channel nomenclature and Common Language during incidents.

4. Roles and Responsibilities

Stakeholders

The Commonwealth has many stakeholders who have roles and responsibilities in implementing the 2012 Seven Lanes Initiatives. The Code of Virginia makes this clear in § 2.2-232:

“All state agencies and localities shall achieve consistency with and support the goals of the statewide interoperability strategic plan by July 1, 2015, in order to remain eligible to receive state or federal funds for communications programs and systems.”

The Code further mandates that it is the responsibility of stakeholders to support the SCIP to remain eligible for funding. § 2.2-232 states,

“All state agencies and localities shall achieve consistency with and support the goals of the statewide interoperability strategic plan by July 1, 2015, in order to remain eligible to receive state or federal funds for communications programs and systems.”

Statewide Interoperability Coordinator

The Code of Virginia further instructs that a Statewide Interoperability Coordinator (SWIC) be appointed. The SWIC is responsible for updating the state’s interoperability plan. § 2.2-231 states,

“Designate a Commonwealth Interoperability Coordinator to review all communications-related grant requests from state agencies and localities to ensure federal grants are used to enhance interoperability and conduct the annual review and update of the statewide interoperability strategic plan as required in §2.2-232.”

Statewide Communications Interoperability Plan

The framework for the SCIP is supported by Governor Robert McDonnell’s Executive Order 41, which seeks to solve any deficiencies in the area of interoperability preparedness. In Executive Order 41, Governor McDonnell states,

*“I continue to authorize the Secretary of Veteran Affairs and Homeland Security in collaboration with any other executive branch agency deemed to be appropriate, to create, devise, and disseminate an annual preparedness assessment for executive branch agencies... in order (to) gauge the overall level of preparedness in the following major areas of emphasis; physical security, continuity of operations planning, information technology security, document protection, human resources, preparedness, training, and **interoperable communications**. The purpose of conducting such assessments shall be to identify deficiencies in these major preparedness areas of emphasis and to devise solutions to address those areas of needed improvement.”*

In addition to the roles and responsibilities outlined above, the Commonwealth will implement the identified Seven Lanes to Interoperability initiatives by leveraging both internal resources, as well external resources such as contractors and local stakeholders to ensure any barriers are removed and the solutions are implemented and verified.

Ultimately, Virginia’s intent is to achieve a sophisticated level of interoperability with a strong focus on planning, outreach, and stakeholder engagement in order to overcome the issues and barriers that affect regional and state progress toward increased interoperability, as guided by the SAFECOM *Interoperability Continuum*, the SCIP’s operational framework of challenges, solutions and metrics, and the Seven Lanes to Interoperability objectives and initiatives.

5. Funding Challenges

With an overall investment of \$650 million in Virginia, a national economy that is struggling, and with the elimination or significant reduction in programs supported by the US Department of Homeland Security during the current economic downturn, identifying ongoing funding to support the statewide interoperability efforts will continue to be a priority.

In 2012, OVAHS will work with VDEM and the State Administering Agency (SAA), to provide grant funds for interoperability projects. These grants will help support local planning projects and the governance structures that bind them, equipment purchases and upgrades, training and exercises, as well as the Communications Caches. This funding will only be awarded to jurisdictions that can demonstrate they are meeting or exceeding the measurements and compliance requirements listed above.

A cautious and prudent approach to the use of public money is critical. With the development of the state interoperability roadmap and the Seven Lanes to Interoperability, coordinated funding requests will ensure a strong return on the state's interoperability investments.

6. Summary

Following the attacks of 9/11, the Commonwealth of Virginia has worked hard to increase its interoperability capabilities. Significant investments have been made in new communication systems and equipment upgrades. After spending more than \$650 million dollars, it is clear that one common vision and pathway is needed to ensure that the Commonwealth can meet the mandated interoperability communications Vision of 2015.

Working with partner stakeholders across the Commonwealth including jurisdictions through the Regional Preparedness Advisory Committees for Interoperability, state agencies including but not limited to the Virginia State Police, the Virginia Department of Emergency Management, the Virginia Information Technology Agency, and federal agencies including the US Department of Homeland Security, the Commonwealth has developed a strong framework and a clear roadmap to achieve interoperable communications by 2015. Advancing interoperability in the Commonwealth of Virginia is and will be an ongoing process. The Commonwealth's regional approach to improving interoperable communications, along with the specific initiatives outlined in the 2012 SCIP, will help address interoperability issues both in the short and long-terms.

During 2011, partner stakeholders met together to analyze the remaining interoperable issues and barriers that are preventing interoperable communications across the Commonwealth. The partners worked to develop "Seven Lanes to Interoperability" to address these challenges. These lanes comprise a road that will drive Virginia to the 2015 interoperability destination. These lanes include:

Lane # 1 - Commonwealth Link to Interoperable Communications (COMLINC)

Lane # 2 - Statewide Agencies Radio System (STARS)

Lane # 3 - Communication Caches

Lane # 4 - Planning, Standard Operating Procedures, Training and Exercises

Lane # 5 – Broadband

Lane # 6 - Information-Sharing

Lane # 7 - Shared Interoperable Channels and use of Common Language Protocol

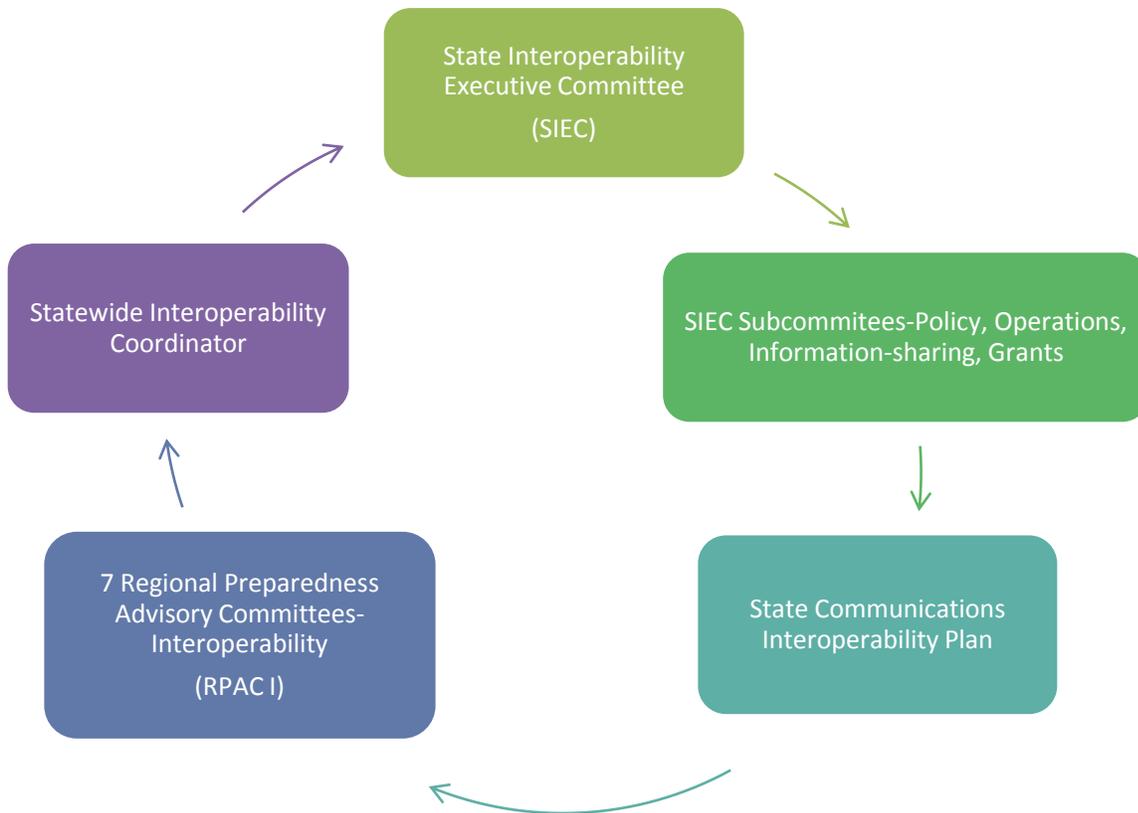
The partner stakeholders also worked to develop specific initiatives that “operationalize” the Seven Lanes to Interoperability with solutions and metrics for each identified issue.

The 2012 SCIP is a new approach to achieving interoperable communications in Virginia. It is clear that we have some distance to travel before we meet the 2015 mandate. With the actions advanced in the 2012 SCIP, the Commonwealth can more effectively move to meet the 2015 mandate for interoperable communications while ensuring that initiatives, policies, training, and investments today will benefit its citizens in the future.

Appendices

Appendix A: Commonwealth of Virginia Interoperability Governance Structure

Commonwealth of Virginia Interoperability Communications Governance Structure



The **Governance Structure graphic** provides members with the structure for the Commonwealth's planning and implementation process. Below the graphic is a brief description of the roles and responsibilities of each component represented.

- **The Statewide Interoperability Coordinator (SWIC):** One of the Statewide Interoperability Coordinator's primary roles is to work with interoperability stakeholders to ensure that the SCIP serves as a roadmap for reaching the 2015 Interoperability Vision. The SCIP must address and plan for the communications interoperability needs of Virginia's public safety practitioners, the Commonwealth and its agencies, and the federal government. The SWIC is responsible for working with interoperability stakeholders to implement the initiatives in the SCIP, ensuring the review of grant funding applications, and producing long-term strategies for improving communications interoperability.

- **State Interoperability Executive Committee (SIEC):** The SIEC helps to define and implement the initiatives outlined in the SCIP. Members of the SIEC draw upon their experience and knowledge of emergency responder needs and capabilities to provide strategic guidance and recommendations to the SIEC-CC, OVAHS, and ultimately the Governor.
- **SIEC Subcommittees:** The SIEC has four Subcommittees, Operations, Policy, Grants Working Group, and Information-sharing. The Subcommittees address relevant and timely interoperability issues to assist the Commonwealth in planning and executing its strategic goals and objectives. The Subcommittees support the SIEC in the planning and implementation of specific initiatives in the SCIP by conducting research and analysis to develop recommendations for consideration.
- **Regional Preparedness Advisory Committees for Interoperability (RPAC-I):** The RPAC-Is are regional committees that serve dual purposes. The members of each regional RPAC-I coordinate their regional interoperability strategies and gather input to share with the SIEC. A representative from each of the seven RPAC-Is sits on the SIEC where they provide regional perspective and input into the statewide decision-making processes.

Appendix B: Department of Homeland Security, Office of Emergency Communications Statewide Communications Interoperability Plan Requirements

1. Virginia's Interoperability Achievements

PAST ACHIEVEMENTS

Through the years, Virginia has been a leader in interoperable communications. Highlighted below are many of the Commonwealth's past achievements:

- In 1978, Virginia established the State Interdepartmental Radio System (SIRS) to ensure that law enforcement agencies could communicate across the state, not just within their individual jurisdictions, and could do so armed with the equipment and frequencies needed to establish connections between localities and the Virginia State Police. In 2004, VSP also developed the Statewide Agencies Radio System, which interfaces with localities and provides communications to a total of 21 state agencies throughout Virginia.
- In 2003, Virginia made strides in improving coordination for communications interoperability by establishing a full-time Commonwealth Interoperability Coordinator.
- Since 2004, OVAHS distributed more than \$44 million to support local interoperable communication projects and assisted localities and regions through federal interoperable communication grants.
- In 2004, the First Responder Sub-Panel, chaired by Senator Stolle of Governor Warner's Secure Commonwealth Panel (SCP), identified radio communications interoperability as a critical post-9/11 priority for Virginia's first responders. In response to this directive, the SCP formed the Interoperability Working Group, which was composed of first responder participants from fire, rescue, and law enforcement agencies throughout the Commonwealth to plan for improved communications interoperability statewide.
- In 2004, Virginia developed the country's first Statewide Communication Interoperability Plan, called the *Strategic Plan for Statewide Interoperable Communications*, or the Statewide Plan. In 2007, DHS mandated that any state requesting Federal interoperability grant funding must have a current SCIP. Based on lessons learned from the Virginia planning process, SAFECOM released the *Statewide Communication Interoperability Planning Methodology* to help states better understand how to integrate practitioner input into a successful statewide strategic plan.

- Since 2004, the Office of Veterans Affairs and Homeland Security has developed, implemented, and updated eight statewide plans (FY 2005-2012)⁵ to increase the availability of interoperable communications information, further establish governance, create standard operating procedures, coordinate state interoperability projects, and improve the technological capabilities of Virginia's stakeholders.
- Through the development of the FY 2005 Statewide Plan, Virginia established a practitioner-based governance structure consisting of the Commonwealth Interoperability Coordinator's Office (CICO)⁶, the State Interoperability Executive Committee, and Initiative Action Teams (IATs). The SIEC plays a major role in the update and review of the Virginia SCIP, and makes grant funding recommendations to the Governor.
- In 2007, OVAHS established three Strategic Communications Caches and contracted with the Sprint Emergency Response Team to provide supplemental and back-up communications statewide.
- In 2008, Virginia added additional committees and subcommittees to its governance structure to ensure efficiency and participation from public safety stakeholders of all levels and disciplines. The Commonwealth added three standing subcommittees under the SIEC — Operations, Policy, and Technical — to explore relevant stakeholder issues in each of those areas, and established seven Regional Preparedness Advisory Committees for Interoperability, based on the previously created Regional Preparedness Advisory Committees (RPACs) across the Commonwealth. These seven interoperability subcommittees work to improve regional interoperability and provide the SIEC with recommendations on future statewide interoperability planning. Virginia is one of the first states to approach interoperability planning from a regional perspective, further aligning with DHS' recommended approach.
- The 2008 legislative session codified the Commonwealth's SIEC in the Virginia Code, further cementing its role in improving communications interoperability (HB 839).
- OVAHS partnered with state agencies and organizations from the Mid-Atlantic All Hazards Consortium Interoperability Working Group on long-term regional efforts to improve and coordinate interoperable communications. Through OVAHS, the Commonwealth hosted the 2008 All Hazards Consortium Interoperability Working Group retreat in Winchester, VA, where the group discussed long-term priorities to conduct a baseline study concerning interoperable communications for the states of Delaware, Maryland, North Carolina, New Jersey, New York, Pennsylvania, Virginia, West Virginia, and the District of Columbia.
- In 2009, OVAHS established the Grants Working Group to assist the office in coordinating the allocation of grant funding and to ensure a fair and explicit grant evaluation process. The GWG evaluates grant submissions and provides funding recommendations to the SIEC and OVAHS for

⁵ Past Statewide Plans can be found on the *Interoperability in Virginia* Web site at: <http://www.vahs.virginia.gov/Initiatives/Interoperability/strategic-plans.cfm>

⁶ The Commonwealth Interoperability Coordinator's Office (CICO) is now referred to as the Office of Veterans Affairs and Homeland Security.

consideration prior to the Governor's final decision. Each of the seven interoperability regions and the three SIEC Subcommittees (which, at the time included Operations, Policy, and Technical) were represented in the group.

- In 2009, OVAHS distributed \$5.5 million in State Homeland Security Grant Program (SHSGP) funding to assist localities and regions across the state with the purchase of equipment and to conduct regional planning and exercises to improve communications at the regional level.
- In 2009, OVAHS distributed \$714,000 in Interoperable Emergency Communications Grant Program (IECGP) grant funding across each of the seven interoperability planning regions to perform planning tasks, conduct training and exercises, or update/sustain their governance structures. OVAHS also awarded \$175,000 in IECGP funding to the three Statewide Communications Caches for planning, training, and exercises.
- In 2009, Virginia hosted the first jointly sponsored communications conference, which convened hundreds of local, state, and federal stakeholders to discuss interoperability issues. The conference -- formerly known as the Virginia Interoperable Communications Conference (VICC) -- was jointly sponsored by the Virginia Association of Public-Safety Communication Officials (APCO), the Virginia National Emergency Number Association (NENA) and the SIEC.
- In June 2010, members of public safety, and the emergency response community collaborated and responded to a simulated catastrophic hurricane in the Hampton Roads area through the Virginia Emergency Response Team Exercise (VERTEX). This annual exercise helps response personnel from state and local governments and volunteer groups role-play their emergency operations functions in order to review and practice the skills needed during an actual emergency.
- OVAHS updated the Virginia Interoperability Governance Structure graphic to reflect several changes. In the updated interoperability governance graphic, interoperability efforts are conducted through OVAHS rather than the Commonwealth Interoperability Coordinator's Office. Additionally, OVAHS created the State Interoperability Executive Committee-Coordinating Committee (SIEC-CC). The SIEC-CC is a smaller and more strategic advisory group whose members will work closely with OVAHS and the SIEC at large on interoperability issues. In addition, the Technical Subcommittee merged with the Operations Subcommittee; the Grants Working Group was added as a Subcommittee; as was the Information-sharing Subcommittee.
- In 2010, SIEC Subcommittees met several times to address the following: The Operations Subcommittee worked closely with leaders from Virginia's Strategic Communications Cache teams to create a plan for providing coordinated and targeted statewide Communications Unit Leader training across Virginia. COML training prepares emergency responders to be communications unit leaders during all-hazards emergency operations, significantly improving communications across the multiple disciplines and jurisdictions responding to an incident. To date, 87 individuals have expressed an interest in participating in regional trainings.
- The Policy Subcommittee worked closely with members of the Grants Working Group to review and provide guidance and input to the 2010 Communications Grants Project Idea Form - the "application" that must be completed to obtain State Homeland Security Grant Program grant

funds. As required, the Policy Subcommittee also reviewed current legislation regarding interoperability policy and procedures in the Commonwealth.

- With the intent to educate Virginia’s public safety community, the former Technical Subcommittee worked with VITA and OVAHS to develop an educational video which describes the Federal Communications Commission’s (FCC) mandate to become narrowband compliant by January 1, 2013. This video explains the mandate, the deadlines, and the consequences of non-compliance.
- In 2010, GWG members reviewed and evaluated 19 SHSGP grant applications and provided award recommendations to the SIEC and OVAHS for consideration. The GWG spent much of 2010 editing and improving the Communications Homeland Security Funding Project Idea Form to improve the quality of applications requesting grant funding.
- OVAHS distributed \$4.9 million in 2010 SHSGP funding to assist localities and regions in expanding their communications interoperability capabilities.
- Following the communication system failures during and following the events of 9/11, Virginia worked to develop the Strategic Communications Caches -- tactical solutions that can be deployed to the site of an emergency within a few hours. All five communications caches in the Commonwealth were put to good use in 2010 for both emergency response deployments and training and exercises. The five Virginia communication caches are based out of:
 - City of Chesapeake-Hampton Roads
 - Fairfax County
 - City of Harrisonburg - Rockingham County
 - Lunenburg County
 - Montgomery County

The Fairfax cache was deployed with the Virginia Task Force I team to assist with search, rescue, and recovery efforts in Haiti following the January 2010 earthquake. The Chesapeake/Hampton cache was used in June at both the City of Norfolk’s Harborfest dock party, and the Tappahannock RivahFest celebration. The Lunenburg County Radio Cache became fully operational on June 1st, 2010 and all equipment was procured by July 1st. This year all of the caches demonstrated their capabilities at various conferences in order help agencies better understand the resources available to them. The communications caches can be requested through the Virginia Emergency Operations Center (EOC) by calling (804) 897-6500 by logging on through the Virginia WebEOC at <https://webeoc.vdem.virginia.gov/eoc7>.

2011 Achievements

STATEWIDE INTEROPERABILITY GOVERNANCE

At its core, interoperability is about collaboration. Moreover, collaboration is most successful when it occurs within an organized system of people working together, developing plans, making decisions, and taking action—this is governance. Collaborative governance promotes transparency, encourages active participation, fosters strategic resource sharing, and helps build consensus for the path forward.

OVAHS continues to foster a strong interoperability governance structure by sustaining and supporting the seven Regional Preparedness Advisory Committees for Interoperability (RPAC-Is) that were created in 2008. These committees work together at the regional level to identify interoperability project priorities, how to best utilize available grant funds, and address other local level challenges that might benefit from a regional or state perspective.

OVAHS and the SIEC also continued to host SIEC Subcommittee meetings for the four standing subcommittees (Operations, Policy, Grants and Information-sharing). Each Subcommittee met several times this year to discuss the following items:

- The Operations Subcommittee worked closely with leaders from the Virginia communications cache teams in 2011 to execute Communications Unit Leader training across Virginia. COML training prepares emergency responders to be communications unit leaders during all-hazards emergency operations, significantly improving communications across the multiple disciplines and jurisdictions responding to an incident. To date, strides have been made in meeting the goal of having over 200 COML trained and credentialed operators.
- The Policy Subcommittee worked closely with the Operations Subcommittees in 2011 to review and provide guidance and input to strategies and documents. The Policy Subcommittee was responsible for reviewing current legislation and making recommendations to OVAHS regarding interoperability policy and procedures in the Commonwealth. In 2011, the Policy Subcommittee worked with stakeholders to gather input on the 2012 State Communications Interoperability Plan (SCIP). The Office of Interoperability and Policy Subcommittee will use a new approach to “operationalize” the SCIP, moving the Commonwealth along the Interoperability Continuum to achieve the 2015 deadline for interoperable communications.
- Using standardized and established methodology, the Grants Subcommittee met and peer-reviewed 25 State Homeland Security Grants that totaled over \$40 million dollars in requests.
- The Information-sharing Subcommittee has worked closely with the City of Charlottesville to launch a pilot project to procure a tool that will allow for multi-jurisdictional real-time Information-sharing, incorporating data and video for emergency response and provides a strategic plan for Information-sharing across the Commonwealth. It is expected that this pilot will expand into a statewide plan.

STATE CODE UPDATE

The Governor issued Executive Order 41, “*Continuing Preparedness Initiatives in State Government and Affirmation of the Commonwealth of Virginia Emergency Operations Plans*,” which provides the Secretary of Veteran Affairs and Homeland Security with the ability to review emergency operations plans and ensure that interoperable communications sections are in compliance with moving towards the 2015 vision.

The Virginia Legislature codified language now found in § 2.2-231, that designates the Statewide Interoperability Coordinator with the authority to ensure that all federal grant requests are in alignment with the 2015 interoperability communication vision.

GRANT REVIEWS

To further engage local and regional stakeholders, and ensure a fair and equitable grant review process, OVAHS established the Grants Working Group (GWG). GWG members play an instrumental role in evaluating interoperability grant submissions and provide award recommendations to the SIEC and OVAHS for consideration.

In 2011, OVAHS distributed over \$12 million in State Homeland Security Grant Program funding, Interoperable Emergency Communications Grant Program and Public Safety Interoperable Communications (PSIC) grants to assist localities and regions in expanding their communications interoperability capabilities. These recipients were selected based on the recommendations of the Grants Working Group.

COMMUNICATION CACHES

All five communications caches in the Commonwealth were put to good use in 2011 for both emergency response deployments and training and exercises. The five Virginia communication caches are based out of:

- City of Chesapeake-Hampton Roads
- Fairfax County
- City of Harrisonburg - Rockingham County
- Lunenburg County
- Montgomery County

The caches were deployed for a variety of uses in the Commonwealth including:

- Virginia Special Olympics
- Harborfest
- Harrisonburg Plane Crash
- Apple Blossom Festival
- Assistance to localities during Hurricane Irene
- Search and Rescue assistance in Page and Rockbridge Counties
- Mutual Aid assistance for West Virginia Search and Rescue mission
- Cave rescue communications training in Grottos VA
- Support for Civil War 150th Anniversary of the Manassas re-enactment

Three of the caches are now at Type 1 Level and the remaining two are at Type II level. All of the caches worked to increase their level of visibility and state readiness by demonstrating the cache capabilities at various conferences including the Fire Chiefs Conference, Virginia Hazardous Materials Conference, the Virginia Interoperability Conference and the Virginia EMS Symposium.

Two of the events listed above were used to provide service to the attendees and to provide training for responders. In addition, a cache was used for training with Harrisonburg Police Department for an "Active Shooter Scenario".

STATEWIDE AND INTER-AGENCY COORDINATION

OVAHS works closely with state agencies and organizations that are also committed to improving interoperability. This collaboration ensures that planning is coordinated across the Commonwealth, in all disciplines and aspects of preparedness and response. These agencies include the Virginia Department of

Emergency Management, and the Virginia Information Technologies Agency and Integrated Service Program. OVAHS also works with VITA's Virginia Geographic Information Network, as well as the VITA Public Safety Communications agency. To best align interoperability planning and data collection efforts, senior leaders from these agencies and organizations meet regularly to identify priorities and areas for collaboration.

VIRGINIA INTEROPERABLE COMMUNICATIONS CONFERENCE

In October, Virginia hosted the eighth annual Virginia interoperable communications conference which annually convenes a record-breaking number of local, state, and federal stakeholders to discuss interoperability issues. For the third year in a row, the conference was jointly hosted by the Office of Interoperability-SIEC, the Virginia Association of Public-Safety Communication Officials, and the Virginia National Emergency Number Association. The conference helps members of the public safety community to create a common understanding of interoperability and work to overcome some of the issues that are entrenched in the culture. The conference helps bring these cultural barriers to the surface, and provides the forum to work together to find common ground and move on despite differences. This year, the conference had a specific track for interoperable communications which facilitated knowledge of the statewide interoperability communications strategic plan and initiatives for 2012 that will help meet the 2015 deadline for interoperability.

VIRGINIA EMERGENCY RESPONSE TEAM EXERCISE

Generally, the Virginia Emergency Response Team Exercise (VERTEX) is an annual exercise that helps response personnel from state and local governments and volunteer groups role-play their emergency operations functions in order to review and practice the skills needed during an actual emergency.

In 2011, members of public safety, and the emergency response community made use of two real-life events for these full-scale exercises while simultaneously serving the public at the events. These exercises made use of the caches and served as an opportunity to test the equipment and operators.

2. State Overview

OVERVIEW

The Commonwealth of Virginia has a unique history, and diverse geography. Virginia is made up of 95 counties and 39 independent cities with 8,001,024 residents occupying 39,490.0 square miles.⁷ In 2006, 39 of the 42 independent cities in the United States were in Virginia⁸ and it was with this spirit of independence of local government that Virginia was founded. This self-government creates a unique dynamic for interoperability. In the past, counties and cities developed their own procedures for administering public safety and acquired the requisite equipment to provide communications within their own locality. This resulted in hundreds of independent communications systems which provided sufficient coverage for localities in most cases, but lacked the technological or cultural ability to work together.

⁷ 2010 Census, U.S. Census Bureau : <http://quickfacts.census.gov/qfd/states/51000lk.html>

⁸ Counties and Equivalent Entities of the United States, Its Possessions, and Associated Areas; Change Notice No. 7 (2001).

Virginia, quite significantly, demonstrates the difference between the “haves and have-nots.” With a vast rural population, Virginia must continually ensure that its rural communities are provided with basic operability while considering the minimal levels of acceptable interoperability. Virginia’s long east-west axis means that Northern Virginia lies closer to New York City than it does to its rural western panhandle. Communications interoperability in Virginia must be redefined to exist in this type of environment where resources are not easily shared, and there is vast distance between the well-developed communities and their rural counterparts.

GEOGRAPHY

Virginia’s geography can be divided into five geographical regions: the Atlantic Coastal Plain, the Piedmont, the Blue Ridge, the Appalachian Ridge and Valley Region, and the Appalachian Plateau (see Figure B-3).

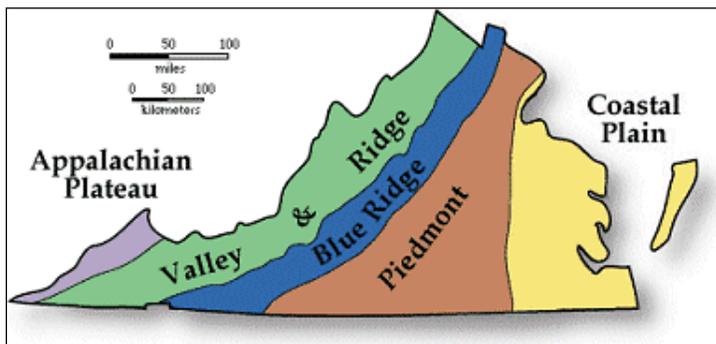


Figure B-1: Five Geographical Regions of Virginia

Atlantic Coastal Plain: The Atlantic Coastal Plain runs from north to south along the Atlantic Ocean. This area of lowlands stretches about 100 miles inland and is covered with salt marshes and swamps. It is often called the Tidewater because of the flow of water up and down the coastal inlets and bays as the tide moves in and out. The Atlantic Coastal Plain is divided by the Chesapeake Bay into a mainland in the west and a peninsula on the east, called the Eastern Shore.

Piedmont: To the west of the Atlantic Coastal Plain is the Piedmont, Virginia's largest geographical land region. Sloping gradually upward from elevations of 200 to 300 feet above sea level in the east to 800 to 900 feet above sea level in the west, the rolling plain of the Virginia Piedmont covers most of central Virginia. About 40 miles wide in the northeast, the Piedmont expands to about 140 miles wide at the North Carolina border. The rivers and streams of the Piedmont generally flow in a southeasterly direction, breaking into low waterfalls at the "fall line" where the Piedmont meets the Atlantic Coastal Plain.

Blue Ridge: To the west of the Piedmont, lies the Blue Ridge. Northeast of Roanoke, Virginia, the Blue Ridge rises steeply from the Piedmont in the east and the Appalachian Ridge and Valley Region in the west. It is the main eastern mountain range of the Appalachian Mountains. South of Roanoke, the Blue Ridge expands into a plateau with valleys, deep ravines, and the highest peaks in Virginia. Mount Rogers, the highest point in Virginia, is located in the Blue Ridge Mountains, south of Roanoke.

Appalachian Ridge and Valley Region: Extending southwest to northeast along Virginia's western border is the Appalachian Ridge and Valley Region. The Great Valley, sometimes called the Valley of Virginia, lies

against the Blue Ridge in the east. Actually, the Great Valley is a series of valleys divided by mountains. The largest and most well-known of these valleys is the Shenandoah Valley. The Appalachian Ridge and Valley Region are riddled with caverns carved into the abundant limestone.

Appalachian Plateau: In the far southwestern portion of Virginia lies the Appalachian Plateau. This plateau extends into Kentucky as the Cumberland Plateau. Covered with rivers, streams, and forests, the Appalachian Plateau averages about 2,000 feet above sea level.⁹

REGIONS

To foster collaboration across the state and plan for homeland security issues, the Governor divided the Commonwealth into seven regions (see Figure B-2).

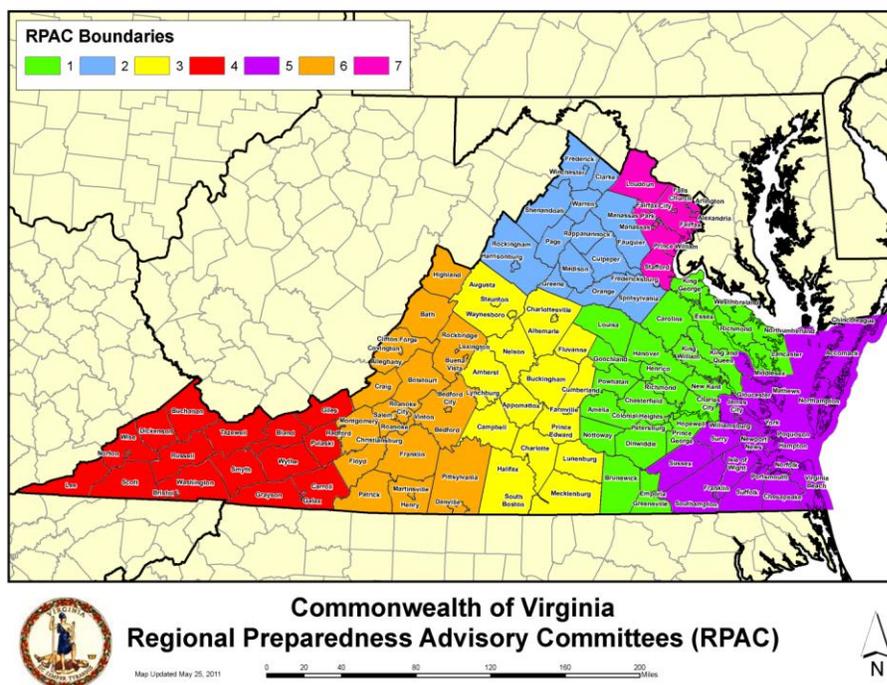


Figure B-2: Regional Preparedness Advisory Committee Regions

LARGEST CITIES AND COUNTIES

Virginia’s most populous cities are Virginia Beach (1), Chesapeake (2), and Norfolk (3)¹⁰ which are located within the Tidewater Region. Virginia’s most populous county is Fairfax County with slightly over one million residents¹¹, located in the Northern Virginia Region. The Tidewater region (which includes Hampton Roads), Northern Virginia (part of the National Capital Region), and Central Virginia (which includes

⁹ The Geography of Virginia Web site: http://www.netstate.com/states/geography/va_geography.htm.

¹⁰ 2010 Census, U.S. Census Bureau

¹¹ 2010 Census, U.S. Census Bureau

Richmond and the surrounding areas) have been designated as Urban Area Security Initiatives (UASIs) by DHS. A jurisdiction defined as a UASI receives federal preparation funding because it is considered to be a high risk area for incidents involving weapons of mass destruction. In 2011, the UASI Central Virginia and part of the Tidewater region may no longer have this designation.

Virginia Urban Area Security Initiatives Map

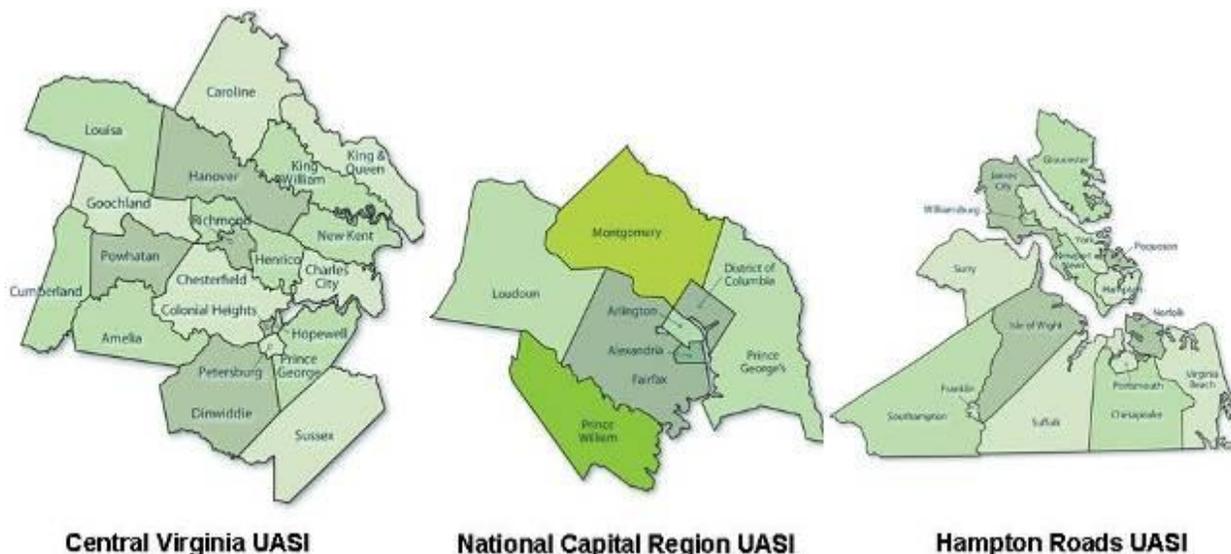


Figure B-3: Virginia Urban Area Security Initiatives Map

WEATHER

Virginia is one of the few states in the union with such a diverse weather pattern that its residents face the dual threat of both hurricanes and blizzards in any given year. These variable weather conditions require first responders to plan and prepare year-round, and interoperate with multiple jurisdictions and agencies at all levels of government.

In Virginia, hurricane season starts in June and runs through October and is followed by the threat of wildfires and drought in early fall. With winter comes snow and ice storms, which create treacherous travel conditions and widespread power outages. With winter's thaw and spring's arrival, the state faces flooding, tornadoes, and potential wildfires once more before heading back into summer and the threat of severe thunderstorms and hurricanes.

UNIQUE ATTRIBUTES

Because of its proximity to and direct interaction with the Nation's Capital, Virginia faces a significant threat of terrorist attack. Virginia experienced significant loss during the September 11, 2001 terrorist attacks when the third plane hit the Pentagon (located in Arlington, Virginia) killing 184 citizens and military personnel (59 on American Airlines Flight 77, and 125 within the Pentagon)¹² and injuring countless others.

¹² CNN Post-9/11 Reports

In the event of a major disaster in the District of Columbia, Virginia contains several major evacuation routes. The major North/South roadways of Interstates 95 and 81 traverse the state. Additionally, I-66 East/West in the North and I-64 East/West in the South are heavily traveled on a daily basis.

Virginia's ports are also a significant entry point for imported goods and must be sufficiently safe-guarded to protect against terrorist threats. The Hampton Roads area hosts the largest military community on the east coast.

SPECIAL EVENTS

In 2011, Virginia hosted a variety of special events that attracted hundreds of thousands of attendees, including NASCAR races in Richmond, Bristol, and Martinsville, and the Boy Scout Jamboree, an event that requires weeks of preparation in order to provide emergency management response. For these local events, and for large scale national events that play out locally, like the Presidential Inauguration, interoperability at the local, state, and federal level is necessary in order to provide safety and response to hazards and incidents. These large scale events test the capabilities and durability of communications systems and operating procedures, and introduce major strategic challenges and implications for emergency responders.

CRITICAL INFRASTRUCTURE

According to the DHS National Infrastructure Protection Plan (NIPP), critical infrastructure is defined as,

“Assets, systems and networks, whether physical or virtual, so vital to the United States that the incapacity or destruction of such assets, systems or networks would have a debilitating impact on security, national economic security, public health or safety, or any combination of those matters.”¹³

In Virginia, the Office of Veterans Affairs and Homeland Security works to protect the Commonwealth's critical infrastructure and key resources, working with the Virginia Department of Emergency Management, the Virginia State Police and other local, state, federal, and private partners.

ALIGNMENT TO THE NATIONAL EMERGENCY COMMUNICATIONS PLAN (NECP) MILESTONES

In June 2008, the DHS Office of Emergency Communications (OEC) developed a National Emergency Communications Plan (NECP), which provides short- and long-term guidance to address national emergency communications deficiencies.¹⁴

Within the NECP are objectives and initiatives that provide national guidance to federal, state, local, and tribal agencies to implement key activities that will improve emergency communications. The objectives and initiatives fall under prescribed NECP Milestones which states can reference as key checkpoints for assessing their progress toward improved emergency communications.

¹³ <http://www.vahs.virginia.gov/Initiatives/CIP/index.cfm>

¹⁴ Department of Homeland Security Office of Emergency Communications Online Fact Sheet for the NECP: http://www.dhs.gov/xnews/releases/pr_1217534334567.shtm

It is one of Virginia's top priorities to ensure the SCIP aligns with the following objectives and initiatives specified within the NECP Milestones.¹⁵ Listed below are several relevant NECP objectives and initiatives, and an explanation of how Virginia has addressed or is planning to address each one.

Objective 1: Formal Governance Structures and Clear Leadership Roles - Initiative 1.1

Milestone: *"Within 12 months, all States and territories should establish full-time statewide interoperability coordinators or equivalent positions."*

- **Virginia's Action:**
 - In December 2003, Virginia hired a full-time interoperability coordinator.

Objective 1: Formal Governance Structures and Clear Leadership Roles - Initiative 1.3

Milestone: *"Within 12 months, tactical planning among Federal, State, local, and tribal governments occurs at the regional interstate level."*

- **Virginia's Action:**
 - Virginia participates in the All Hazards Consortium (AHC), Multi-State Information-sharing Analysis Center, FEMA Region 3 Regional Emergency Communications Working Group, and National Capital Region Regional Preparedness Working Group for Interoperability to work on tactical planning with neighboring states.

Objective 3: Common Planning and Operational Protocols - Initiative 3.1

Milestone: *"Within 18 months ... programs an appropriate set of frequency-band-specific nationwide interoperability channels into all existing emergency responder radios..."*

- **Virginia's Actions:**
 - Virginia is building out the national interoperability channels, requiring all grant applicants to program the national interoperability channels into newly purchased, grant-funded equipment.
 - --Virginia supports the expansion of national interoperability channels in all bands to allow responders to use their home system's radio regardless of location within the Commonwealth of Virginia.

Objective 3: Common Planning and Operational Protocols - Initiative 3.1

Milestone: *"Within 24 months, all SCIPs reflect plans to eliminate coded substitutions throughout the Incident Command System (ICS), and agencies incorporate the use of existing nationwide interoperability channels into SOPs, training, and exercises at the federal, State, regional, local, and tribal levels."*

- **Virginia's Action:**
 - Virginia developed a common language protocol for use throughout the state that is a nationally recognized best practice model for other states interested in transitioning away from coded transmissions during radio communications.

Objective 3: Common Planning and Operational Protocols - Initiative 3.2

¹⁵ Department of Homeland Security Office of Emergency Communications [National Emergency Communications Plan](#), 2008, Section 3 beginning on page 9.

Milestone: “Within 12 months, all Federal, State, local, and tribal emergency response providers within UASI jurisdictions have implemented the Communications and Information Management section of the National Incident Management System.”

- **Virginia’s Action:**

- Virginia endorses the use of NIMS and the Incident Command System to guide how disciplines operate with one another for mutual aid. The Office of Veterans Affairs and Homeland Security supports NIMS training and exercises and promotes NIMS compliance as well as the use of ICS.

Objective 7: Disaster Communications Capabilities - Initiative 7.2

Milestone: “Within 24 months, all Federal, State, local, and tribal agencies in UASIs will have defined alternate/backup capabilities in emergency communications plans.”

- **Virginia’s Action:**

- Virginia will continue to expand STR to enhance back-up communications capabilities within the Commonwealth. Currently, all three of the UASIs in Virginia have strategic technology reserves.

Objective 7: Disaster Communications Capabilities - Initiative 7.2

Milestone: “Within 24 months, complete disaster communications training and exercises for all 56 States and territories.”

- **Virginia’s Actions:**

- Virginia continues to incorporate more interoperable disaster communications training and exercises into existing statewide exercises.
- Each year, the Virginia Emergency Response Team Exercise serves as a statewide exercise opportunity designed to prepare response agencies and local government representatives for their role in an emergency.
- Exercise activities have also included deployment of Communication Caches assets, hurricane evacuation communication drills, and monthly communication drills of systems around nuclear power stations.

ALIGNMENT TO THE NATIONAL EMERGENCY COMMUNICATIONS PLAN GOALS

In 2010, states were required to demonstrate alignment with the DHS NECP Goal 1. Goal 1 is as follows:

By 2010, 90 percent of all high-risk urban areas designated within the Urban Areas Security Initiative (UASI) are able to demonstrate response-level emergency communications within one hour for routine events involving multiple jurisdictions and agencies.

In 2010, Central Virginia, National Capital Region, and Richmond UASIs successfully demonstrated their capabilities at Harborfest, the July 4th celebration on the National Mall, and the Richmond Speedway respectively. All three UASIs received passing marks from DHS and suggested improvements in an After Action Report.

In 2011, states were required to demonstrate alignment with NECP Goal 2, which measures capabilities and performance within all the county and tribal areas. Goal 2 states:

By 2011, 75 percent of non-UASI jurisdictions are able to demonstrate response-level emergency communications within one hour for routine events involving multiple jurisdictions and agencies.

At this time, 70.3% of Virginia's counties have responded to the NCEP Goal 2 survey regarding emergency communications capabilities. Approximately 63% have submitted information regarding emergency communications performance evaluations. Partial results of the survey are reflected in Figures B-4 and B-5.

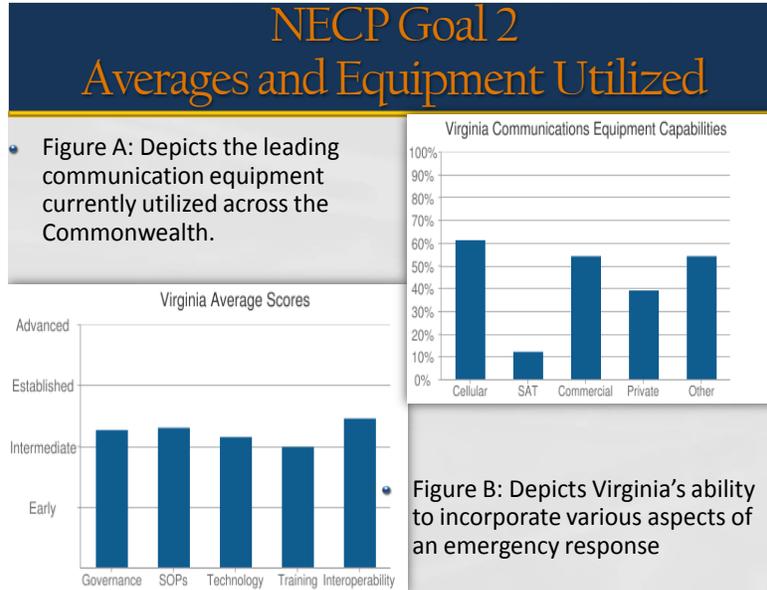


Figure B-4

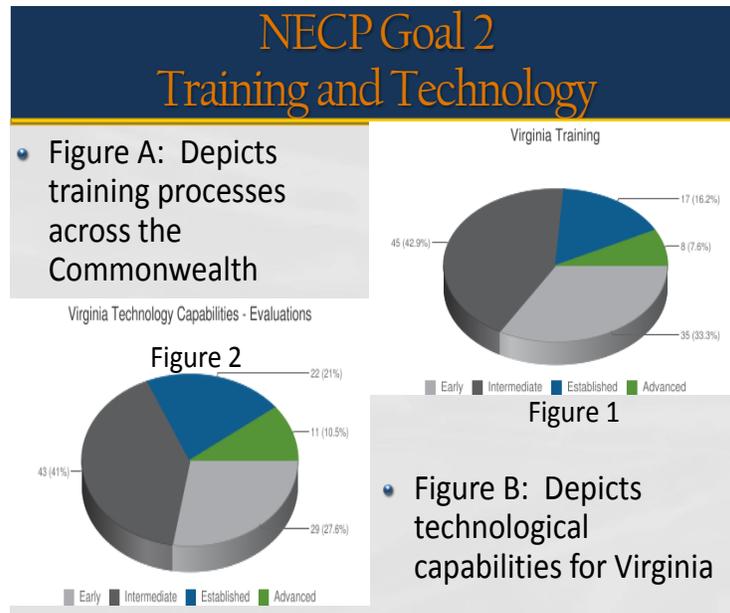


Figure B-5

LIST OF FIGURES

Figure B-1: Five Geographical Regions of Virginia

Figure B-2: Regional Preparedness Advisory Committee Regions

Figure B-3: Virginia Urban Area Security Initiatives Map

Figure B-4: NECP Goal 2 Virginia Averages and Equipment Utilized Survey Results

Figure B-5: NECP Goal 2 Virginia Training and Technology Survey Results

Appendix C: Glossary of Terms

Analog: A signal that may vary continuously over a specific range of values.

Band: The spectrum between two defined limited frequencies. For example, the Ultra High Frequency (UHF) is located from 300 MHz to 3,000 MHz in the radio frequency spectrum.

Bandwidth: The range within a band of frequencies; a measure of the amount of information that can flow through a given point at any given time.

Block grant: Federal grant funding that is allocated to state and localities based on a pre-determined statutory formula.

Channel: A single unidirectional or bidirectional path for transmitting or receiving, or both, of electrical or electromagnetic signals.

Communications interoperability: The ability of public safety agencies to talk across disciplines and jurisdictions via radio communications systems, exchanging voice and/or data with one another on demand, in real time, when needed, and as authorized.

Communications system: A collection of individual communication networks, transmission systems, relay stations, tributary stations, and data terminal equipment usually capable of interconnection and interoperation to form an integrated whole. The components of a communications system serve a common purpose, are technically compatible, use common procedures, respond to controls, and operate in unison.

Coverage: The geographic area included within the protected range of a wireless radio system based upon its FCC licenses.

Cycle: One complete performance of a vibration, electrical oscillation, current alternation, or other periodic process.

Digital: Voice communication occurs as an analog signal; that is, a signal with a voltage, frequency, or phase level that continuously varies. Digital signals at baseband occur as the presence or absence of electronic pulses, often representing only one or many values. Voice transmissions may be sent over digital radio systems by sampling voice characteristics and then converting the sampled information to a digital format.

Discretionary grant: Federal grant funding distributed at the discretion of the agency administering the program funding, usually through a competitive process.

Emergency Management: Public protection, central command and control of public safety agencies during emergencies.

Environmental Health/Hazardous Materials specialists: Environmental health personnel.

First responders: Individuals who in the early stages of an incident are responsible for the protection and preservation of life, property, evidence, and the environment, including emergency response providers, as well as emergency management, public health, clinical care, public works, and other skilled support (such as equipment operators) that provide immediate support services during prevention, response, and recovery operations.

Formula grant: Federal grant that is allocated based on a predetermined statutory formula.

Frequency: The number of cycles or events of a periodic process in a unit of time.

Frequency bands: Where land mobile radio systems operate in the United States, including:

High HF	25-29.99 MHz
Low VHF or Low Band	30-50 MHz
High VHF or High Band	150-174 MHz
UHF	450-470 MHz
UHF TV Sharing	470- 512 MHz
700 MHz	764-776/794-806 MHz - Pre consolidation 769-775/799-805 - Post Consolidation Band
800 MHz	866-869/ 821-824 MHz - Pre-Reband 851-854/806-809 MHz - NPSPAC-Post Reband

Grant: Funding made available to local agencies from state and federal government agencies, as well as from private sources, such as foundations. Grants usually require the submission of a formal application to justify one's funding request.

Hertz: Abbreviation for cycles per second.

Infrastructure: The hardware and software needed to complete and maintain the radio communications system.

Interference: Extraneous energy, from natural or man-made sources, that impede the reception of desired signals.

Jurisdiction: The territory within which power or authority can be exercised.

Local revenue fund: Funding obtained by local governments through local taxes (e.g. sales tax, property tax), user fees, and other user charges, as well as through the issuing of debt instruments, such as bonds.

Locality: A particular neighborhood, place, or district.

Metropolitan Statistical Areas (MSAs): Metropolitan areas in the U.S. are defined by the federal government as MSAs.

Modem: An acronym for modulator/demodulator, which is a device that translates digital signals coming from a computer into analog signals that are transmitted over standard telephone lines. The modem also translates the analog signal back into a digital signal that a computer can understand.

Mutual aid: The mutual aid mode describes major events with large numbers of agencies involved, including agencies from remote locations. Mutual aid communications are not usually well planned or rehearsed. The communications must allow the individual agencies to carry out their missions at the event, but follow the command and control structure appropriate to coordinate the many agencies involved with the event.

Mutual aid channel: A radio channel specifically allocated for use during emergency mutual aid scenarios.

Narrowbanding: Generally, narrowband describes telecommunication that carries voice information in a narrow band of frequencies. For state and local public safety, narrowbanding typically refers to the process of reducing the useable bandwidth of a public safety channel from 25 kHz to 12.5 kHz. The FCC issued the migration of PLMR systems using frequencies in the 150-174 MHz and 421-512 MHz bands to narrowband technology. These rules set deadlines on applications for new wideband systems, modifications of existing wideband systems, manufacture and importation of 25 kHz equipment, the requirement for public safety to migrate to 12.5 kHz systems by January 1, 2013.

Receiver: The portion of a radio device that converts the radio waves into audible signals.

Refarming: An administrative process conducted by the FCC to reallocate channel bandwidths and increase spectrum efficiency.

Repeater: In digital transmission, equipment that receives a pulse train, amplifies it, retimes it, and then reconstructs the signal for retransmission; in fiber optics, a device that decodes a low-power light signal, converts it to electrical energy, and then retransmits it via an LED or laser source. Also called a “regenerative repeater”.

Spectrum: The region of the electromagnetic spectrum in which radio transmission and detection techniques may be used.

Spectrum efficiency: The ability to optimize the amount of information sent through a given amount of bandwidth.

Strategic Technology Reserve: The Strategic Technology Reserve (STR) is a suite of communications technology and manpower designed to help establish communications when existing critical infrastructure is damaged, destroyed or otherwise inaccessible during an emergency, or disaster. The STR is also available when an incident requires more communications resources than are locally available.

Steering committee: A group of high-level officials charged with setting policy for a project.

Supplemental responders: Responders who provide support to first responders during incidents requiring special assistance.

Tactical Interoperable Field Operations Guide: This is a reference guide for public safety radio technicians and communications planners. The guide contains radio regulations, tables of radio channels, and technical reference information for those establishing or repairing emergency communications in a disaster area.

Transmitter: The portion of a radio device that sends out the radio signal.

Trunked radio system: A system that integrates multiple channel pairs into a single system. When a user wants to transmit a message, the trunked system automatically selects a currently unused channel pair and assigns it to the user, decreasing the probability of having to wait for a free channel for a given channel loading.

Appendix D: Acronym Table

Acronym	Meaning
AEL	Authorized Equipment List
AHC	All Hazards Consortium
APCO	Association of Public Safety Communication Officials
CICO	Commonwealth Interoperability Coordinator's Office
COML	Communications Unit Leader
COMLINC	Commonwealth's Link to Interoperable Communications
DHS	Department of Homeland Security
EOC	Emergency Operations Center
EMS	Emergency Management Services
FCC	Federal Communications Commission
GIS	Geographic Information Systems
GWG	Grants Working Group
IAT	Initiative Action Team
ICS	Incident Command System
IECGP	Interoperability Emergency Communications Grant Program
IFOG	Interoperability Field Operations Guide
ISP	Integrated Service Program
ISWG	Information-sharing Working Group
LTR	Logic Trunked Radio
LMR	Land Mobile Radio
MSA	Metropolitan Statistical Area
MOU	Memorandum of Understanding
NCR	National Capital Region
NECP	National Emergency Communications Plan
NENA	National Emergency Numbers Association
NG911	Next Generation 911
NIMS	National Incident Management System
NIPP	National Infrastructure Protection Plan
NoVA	Northern Virginia
NPSTC	National Public Safety Telecommunications Council
NRP	National Response Plan
OCP	Office of Commonwealth Preparedness
OVAHS	Office of Veterans Affairs and Homeland Security
P25	Project 25
PSAP	Public Safety Answering Point
PSC	Public Safety Communications
PSIC	Public Safety Communications Interoperability (Grant Program)
RFP	Request for Proposal
RICP	Regional Interoperable Communications Plan
RPAC	Regional Preparedness Advisory Committee
RPAC-I	Regional Preparedness Advisory Committee for Interoperability
SAA	State Administering Agency
SBU	Sensitive But Unclassified

SCI	Special Compartmentalized Information
SCIP	Statewide Communication Interoperability Plan
SCP	Secure Commonwealth Panel
SHSGP	State Homeland Security Grant Program
SIEC	State Interoperability Executive Committee
SIRS	Statewide Interdepartmental Radio System
SOPs	Standard Operating Procedures
STARS	Statewide Agencies Radio System
STR	Strategic Technology Reserve
SWIC	Statewide Interoperability Coordinator
TICP	Tactical Interoperable Communications Plan
UASI	Urban Area Security Initiatives
VAGEMSA	Virginia Association of Governmental EMS Administrators
VDEM	Virginia Department of Emergency Management
VDOT	Virginia Department of Transportation
VERTEX	Virginia Emergency Response Team Exercise
VGIN	Virginia Geographic Information Network
VICC	Virginia Interoperable Communications Conference
VIISE	Virginia Information Interoperability Sharing Environment
VITA	Virginia Information Technologies Agency
VSP	Virginia Department of State Police

Appendix E: Communication Cache Policies and Procedures

Communication Cache Compliance Documentation

Definition of Common Terminology

- **Incident Commander: (Type I-V)**
 - On the ground leading/commanding person who may request the radio cache for an emergency incident
- **Cache Contact: (Type I-V)**
 - Persons responsible for processing initial emergency request for radio cache deployment: might not be true to every situation. Might be another available number to call rather than Dispatch. Smaller localities might just have a POC.
 - Liaisons between Incident Commander and Radio Cache Manager and/or Cache Decision Leader
- **Radio Cache Manager: (Type I-III)**
 - Person from hosting locality responsible for maintaining the radio caches operational capacity
 - Person from hosting locality responsible for the physical deployment and set up of cache at requested destination
- **Cache Decision Maker: (Type I-III)**
 - Person from hosting locality responsible for deciding if an emergency or planned activity request within the region or from the state is granted
 - *Note: In some situations the radio cache manager and decision maker may be the same person*
- **Deployable Trained Personnel: (Type I-III)**
 - Team from hosting locality that accompanies the cache through deployment, set-up, distribution, use and collection
 - Works closely with Radio Cache Manager

Minimum Capabilities & MOU Requirement Guidelines Based on Radio Cache Type

	Type I	Type II	Type III	Type IV	Type V
Number of Radios	501+ radios	301-500 radios	101-300 radios	101-200 radios	25-100 radios
Radio Interoperability Standard	<ul style="list-style-type: none"> • P-25 compatibility • Statewide- deployable cache equipment must be compatible with other statewide-deployable caches 	<ul style="list-style-type: none"> • P-25 compatibility • Statewide- deployable cache equipment must be compatible with other statewide-deployable caches 	<ul style="list-style-type: none"> • P-25 compatibility • Statewide- deployable cache equipment must be compatible with other statewide-deployable caches 	<ul style="list-style-type: none"> • P-25 compatibility unless exception is granted 	<ul style="list-style-type: none"> • P-25 compatibility unless exception is granted
Additional Equipment	<ul style="list-style-type: none"> • 2 rechargeable and one high shelf life disposable batteries per portable radio • 1 speaker mic 	<ul style="list-style-type: none"> • 2 rechargeable and one high shelf life disposable batteries per portable radio • 1 speaker mic 	<ul style="list-style-type: none"> • 2 rechargeable (all) and one high shelf life disposable (deployable radios only) batteries per 	<ul style="list-style-type: none"> • 2 rechargeable (all) and one high shelf life disposable (deployable radios only) batteries per 	<ul style="list-style-type: none"> • 2 batteries per portable radio • 1 speaker mic • 1 carrying case or clip per radio

	<ul style="list-style-type: none"> • 1 carrying case or clip per radio • Appropriate charging capacity for 100% of fleet within 24 hours • At least one audio interconnect (portable gateway) • Consider: Satellite communications (phone, etc.) 	<ul style="list-style-type: none"> • 1 carrying case or clip per radio • Appropriate charging capacity for 100% of fleet within 24 hours • At least one audio interconnect (portable gateway) • Consider: Satellite communications (phone, etc.) 	<ul style="list-style-type: none"> • portable radio • 1 speaker mic • 1 carrying case or clip per radio • Appropriate charging capacity for 100% of fleet within 24 hours • At least one audio interconnect (portable gateway) 	<ul style="list-style-type: none"> • portable radio • 1 speaker mic • 1 carrying case or clip per radio • Appropriate charging capacity for 100% of fleet within 24 hours 	<ul style="list-style-type: none"> • Appropriate chargers • Extra Batteries charged with 10 year shelf life
System Requirements.	<ul style="list-style-type: none"> • Trunking capable based on baseline study • Blend of frequencies - at least 100 radios per band • Radio programming capability on-site • Repeaters • Power (generator) 	<ul style="list-style-type: none"> • Trunking capable based on baseline study • Blend of frequencies - at least 75 radios per band • Radio programming capability on-site • Repeaters • Power (generator) 	<ul style="list-style-type: none"> • Trunking capable based on baseline study • Blend of frequencies – at least one radio in each band for use with a gateway device. Plus a minimum of two radios in each band. 	<ul style="list-style-type: none"> • Trunking capable unless exception is granted based on baseline study • Blend of frequencies – at least one radio in each band for use with a gateway device. Plus a minimum of two radios in each band. 	<ul style="list-style-type: none"> • Trunking capable unless exception is granted based on baseline study • Blend of frequencies – at least one radio in each band for use with a gateway device. Plus a minimum of two radios in each band.
700/800 MHz	<ul style="list-style-type: none"> • Spectrum use defined by operating region <ul style="list-style-type: none"> ○ 800 MHz should be able to do both 700 and 800 MHz ○ Must have the spectrum available to support cache • Minimum 500 talk groups (upper tier radio) – system type specific • ITAC, VTAC, UTAC, in all radios 	<ul style="list-style-type: none"> • Spectrum use defined by operating region <ul style="list-style-type: none"> ○ 800 MHz should be able to do both 700 and 800 MHz ○ Must have spectrum available to support cache • Minimum 500 talk groups (upper tier radio) – system type specific 	<ul style="list-style-type: none"> • Spectrum use defined by operating region <ul style="list-style-type: none"> ○ 800 MHz should be able to do both 700 and 800 MHz ○ Must have spectrum available to support cache • Minimum 500 talk groups (upper tier radio) – system type specific • ITAC, VTAC, UTAC, in all radios 	<ul style="list-style-type: none"> • Spectrum use defined by operating region <ul style="list-style-type: none"> ○ 800 MHz should be able to do both 700 and 800 MHz ○ Must have spectrum available to support cache • Minimum 500 talk groups (upper tier radio) – system type specific • ITAC, VTAC, UTAC, in all radios 	<ul style="list-style-type: none"> • Spectrum use defined by operating region <ul style="list-style-type: none"> ○ 800 MHz should be able to do both 700 and 800 MHz ○ Must have spectrum available to support cache • Minimum 500 talk groups (upper tier radio) – system type specific • ITAC, VTAC, UTAC, in all radios

	<ul style="list-style-type: none"> • Encryption capable (no cost?) 	<ul style="list-style-type: none"> • ITAC, VTAC, UTAC, in all radios • Encryption capable (no cost?) 	<ul style="list-style-type: none"> • Encryption capable (no cost?) 	<ul style="list-style-type: none"> • Encryption capable (no cost?) 	<ul style="list-style-type: none"> • Encryption capable (no cost?)
UHF, VHF High Band, VHF Low Band	<ul style="list-style-type: none"> • State Interoperability Channels • National Interoperability Channels 	<ul style="list-style-type: none"> • State Interoperability Channels • National Interoperability Channels 	<ul style="list-style-type: none"> • State Interoperability Channels • National Interoperability Channels 	<ul style="list-style-type: none"> • State Interoperability Channels • National Interoperability Channels 	<ul style="list-style-type: none"> • State Interoperability Channels • National Interoperability Channels
Designated personnel (Cache owner determines level of effort of personnel. I.e. FTE vs. additional responsibility of existing staff)	<ul style="list-style-type: none"> • Radio cache manager • Appropriate decision maker • Deployable trained personnel 	<ul style="list-style-type: none"> • Radio cache manager • Appropriate decision maker • Deployable trained personnel • 	<ul style="list-style-type: none"> • Radio cache manager • Appropriate decision maker • Deployable trained personnel • 	<ul style="list-style-type: none"> • Designated contact personnel 	<ul style="list-style-type: none"> • Host location general support
Deployable Personnel	At least 4 designated and trained personnel are available for deployment (one team member is COML). Personnel can be multi-jurisdictional/multi-agency.	At least 4 designated and trained personnel are available for deployment (one team member is COML). Personnel can be multi-jurisdictional/multi-agency.	At least 2 designated and trained personnel are available for deployment (one team member is COML). Personnel can be multi-jurisdictional/multi-agency.	N/A	N/A
Deployment ratio	100% deployable within region; 100% deployable outside of region (with spectrum/frequency considerations)	100% deployable within region; 100% deployable outside of region (with spectrum/frequency considerations)	100% deployable within region; 50% deployable outside of region (with spectrum/frequency considerations)	100% deployable within region; 25% deployable outside of region (with spectrum/frequency considerations)	100% deployable within region; 0% deployable outside of region
Transportation Requirements	<ul style="list-style-type: none"> • En-route within 2 hours • Trailer or dedicated vehicle • Tower with a trailer (elevated antennae system) 	<ul style="list-style-type: none"> • En-route within 2 hours • Trailer or dedicated vehicle 	<ul style="list-style-type: none"> • En-route within 2 hours • Trailer or dedicated vehicle 	<ul style="list-style-type: none"> • En-route within 2 hours 	<ul style="list-style-type: none"> • En-route within 2 hours
Inventory Management	Yes-automated preferred	Yes-automated preferred	Yes-automated preferred	Yes	Yes
Training and Exercises	Yes	Yes	Yes	Yes	Yes

Additional requirements	Self sustaining team (people, power, food, water, shelter, etc) – 72 hours	Self sustaining team (people, power, food, water, shelter, etc) – 48 hours	N/A	N/A	N/A
Regional MOU Requirements	<ul style="list-style-type: none"> • Same as Type V plus MOU will also: • Commit region to 100% cache availability for state-wide deployment • Identify on call radio cache manager, appropriate decision maker, and deployable trained personnel. 	<ul style="list-style-type: none"> • Same as Type V plus MOU will also: • Commit region to 100% cache availability for state-wide deployment • Identify on call radio cache manager, appropriate decision maker, and deployable trained personnel. 	<ul style="list-style-type: none"> • Same as Type V plus MOU will also: • Commit region to 50% cache availability for state-wide deployment • Identify deployable equipment • Identify on call radio cache manager, appropriate decision maker, and deployable trained personnel. 	<ul style="list-style-type: none"> • Same as Type V plus MOU will also: • Commit region to 25% cache availability for state-wide deployment • Identify deployable equipment 	MOU between hosting locality and participating region. MOU will: <ol style="list-style-type: none"> 1) Identify host locality 2) Identify host organization 3) Identify and provide 24/7 contact information for cache location 4) Identify regions' operational protocols and procedures 5) Identify all first responder organizations within the region that will be provided a detailed and up to date cache inventory, regional deployment form and cache contact list.
Region to State MOU Requirements	<ul style="list-style-type: none"> • Same as Type IV plus MOU will also: • Agree to Virginia EOC deployment form for cache • Identify radio cache manager, appropriate decision maker, and deployable trained personnel 	<ul style="list-style-type: none"> • Same as Type IV plus MOU will also: • Agree to Virginia EOC deployment form for cache • Identify radio cache manager, appropriate decision maker, and deployable trained personnel 	<ul style="list-style-type: none"> • Same as Type IV plus MOU will also: • Identify 50% of cache that is statewide deployable • Agree to Virginia EOC deployment form for statewide-deployable equipment • Identify radio cache manager, appropriate 	<ul style="list-style-type: none"> • MOU will: • Identify 25% of cache that is statewide-deployable • Agree to Virginia EOC deployment form statewide-deployable equipment • Owner commits to providing the Virginia EOC a detailed cache 	<ul style="list-style-type: none"> • No MOU required • Owner commits to providing the Virginia EOC a detailed cache inventory and cache contact list and maintaining an updated inventory list <p>(Note: While this type is not intended for state wide</p>

			decision maker, and deployable trained personnel <ul style="list-style-type: none"> (Note: While 50% of this type is not intended for state wide deployment, it is helpful for the Virginia EOC to maintain a central list of all radio cache resources) 	inventory and cache contact list and maintaining an updated inventory list <ul style="list-style-type: none"> (Note: While 75% of this type is not intended for state wide deployment, it is helpful for the Virginia EOC to maintain a central list of all radio cache resources) 	deployment, it is helpful for the Virginia EOC to maintain a central list of all radio cache resources)
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**Commonwealth Radio Cache
Policies, Procedures and Operational Protocols by Type**

The following statewide policies, procedures and operational protocols are developed as a minimum requirement for each of the 5 Types of radio caches purchased with state interoperable communications grant funding. Radio cache host agencies shall understand and comply with the responsibility of radio cache ownership. Additionally, the host agency shall agree to adhere to and enforce these policies, procedures, and operational protocols.

Minimum Policies, Procedures and Operational Protocols Guidance/Requirements for Types I-V

Prior to Radio Cache Purchase	<ul style="list-style-type: none"> Develop a strategy for procuring radio cache or enhancements to existing cache Leverage interoperability baseline information (estimated completion date June 30, 2007) Develop regional emergency and scheduled event deployment forms and procedures for internal use Develop Inventory Control Strategy Establish dedicated personnel as appropriate based on Type Develop/update MOUs with relevant jurisdictions Adopt and agree to enforce statewide policies, procedures, and operational protocols Agree to standardize compatibility of all statewide-deployable caches by coordinating with peer radio cache managers
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	throughout the Commonwealth
By the first grant reporting period	<ul style="list-style-type: none"> • Show progress towards the region’s radio cache strategy • Inventory radios and develop an authorized cache list • Send authorized cache list and cache point of contact to regional and Virginia EOCs
Maintenance	<ul style="list-style-type: none"> • Fully maintain and ensure the cache is ready for deployment at all times • Exercise rechargeable batteries at least twice a year • Label authorized cache equipment appropriately • Consider and coordinate maintenance costs (replacement or upgrading) for cache equipment within the host jurisdiction or region
Operational	<p>Rules of Use: All agencies shall conform to the following rules of use for their cache radios:</p> <ul style="list-style-type: none"> • National Incident Management System: Use of an Incident Command System compliant with the National Incident Management System is required for use of any regional interoperability resource. • Plain/Common language: All Communications shall be in plain or common language. Radio codes, acronyms and abbreviations are to be avoided as they may cause confusion between agencies. Additionally, it should be understood that plain words such as “help”, “assistance”, “repeat” and “back-up” may have different operational meanings to different agencies. The word “Help” should be used alone unless in the context of a life-threatening situation. Requests for assistance or backup should clarify the reason for the request. • Unit Identification: Agency name or identifier shall precede unit identifier.
Statewide Deployment	<p>Requests may be made for emergency incidents, training & exercises</p> <p>Deployment within regions may be conducted following the regional policies and procedures developed by the cache owner(s). When in use within the region the radio cache manager or point of contact must inform the Virginia EOC of its status for Types I-III.</p> <p>Interoperable Communications Request: Emergency (Outside of Region)</p> <ul style="list-style-type: none"> • Responsible party within the locality must request statewide-deployable resources from the Virginia EOC providing the following information: <ul style="list-style-type: none"> ○ SALTT – Size, Amount, Location, Type and Time (deployment and duration)

- User's agency
- On-scene agencies requiring interoperability
- Reason for request/type of event
- User/requestor and/or servicing dispatch contact phone number
- It is the requesting agency's responsibility to maintain appropriate internal procedures to ensure that requests are only passed to the Virginia EOC if the request originated from, or was approved by, a person with the authority to accept fiscal responsibility for radio cache deployment costs
- The request for deployment of a radio cache indicates acceptance of fiscal responsibility for the cost of any damaged or lost equipment

Interoperable Communications Request: Scheduled Events and Training (Outside Region)

- Application for deployment of the radio cache for scheduled events should be initiated no later than 30 days and no more than 120 days prior to the event
 - Some events will require last minute requests, i.e. funerals, protests, etc.
- The request shall be made using the proper request form directly to and be granted by the cache decision maker (Type I-III) or appropriate personnel (Type IV-V) for the host radio cache
- The request shall be granted by the priority of the request and by date the request was received
- The requesting jurisdiction may be responsible for pick-up and return of cache equipment
- Inventory and inspection will occur upon return of the radios and any lost or damaged radios will be billed to the jurisdiction returning the radios
- Any radios loaned for scheduled events will be subject to recall for a higher priority emergency incident
- The host agency receiving a request for radio cache deployment will notify the other regional radio cache host agencies of the deployment, if applicable
- Once a radio cache has been committed or deployed for a special event, contact shall be made to provide information regarding the number of radios deployed, the host locality name, the receiving localities name, and the name and date of the event to:
 - Communications
 - Firefighter, HazMat, Urban Search and Rescue
 - Information and Planning
 - Law Enforcement
- A request for tactical repeaters and interconnect devices will involve a planning meeting with the cache manager or COML to review the events communications plan and will require the deployment of Cache personnel to maintain the equipment during the event

	<ul style="list-style-type: none"> • The radio cache manager is responsible for telling the Virginia EOC about the status of their cache when in use <p>Radio Cache Deactivation</p> <ul style="list-style-type: none"> • The Incident Commander in conjunction with the Emergency Manager determines when the radio cache is no longer required • The Incident Commander is responsible for coordinating the return of cache • At the end of the incident, the Incident Commander or a designee is responsible for inventorying all radios returned to the cache <ul style="list-style-type: none"> ○ Before leaving the incident scene, the Incident Commander will determine if any radios have not been returned to the radio cache and note the user and/or agency to which the radio was distributed ○ If the missing radios cannot be recovered at the incident scene, information will be provided to the appropriate point of contact for resolution • The radios will be returned to the host radio cache site within 72 hours after the incident is over <p>Problem reporting and Resolution</p> <ul style="list-style-type: none"> • Agencies using radio caches may report any problems with the specific radio cache to the radio cache manager (Type I-III) or appropriate personnel (Type IV-V) from which the cache was obtained • The cache manager (Type I-III) or appropriate personnel (Type IV-V) from which the cache was obtained will be responsible for ensuring effective resolution to problems that exist
Training & Exercises	<ul style="list-style-type: none"> • Cache resources within a jurisdiction shall be used for training and exercise activities at a minimum of twice per year • A training report shall be provided annually to the Commonwealth Interoperability Coordinator's Office • Equipment shall be maintained in a consistent operational condition and users shall be familiar with its function
Inventory Control	<ul style="list-style-type: none"> • A complete inventory of the caches personnel and equipment shall be conducted on an annual basis and sent to regional and Virginia EOCs • Each radio cache must be maintained in a condition available for immediate deployment within 2 hours of a request • It is the responsibility of the host jurisdiction(s) to maintain control over their equipment • Replacement or upgrading of cache equipment shall be coordinated by the host jurisdiction(s)
Governance	<ul style="list-style-type: none"> • MOUs shall be developed between host locality, region, and the state • Existing Mutual Aid MOUs will be acknowledged • All radio cache managers for Type III and above will participate on the State Interoperability Advisory Group and fulfill the responsibilities of membership of the group • Conflict resolution: The State Interoperability Executive Committee will make final recommendations to resolve conflicts

Appendix F: Interoperability Channels

The FCC has designated several frequencies as primary status for interoperable communications within VHF, UHF, 700 MHz and 800 MHz. These frequencies can be used on a non-routine basis for interoperable communications between any local, state or federal entity. Additionally, these frequencies can be used across interstate borders with neighboring public safety jurisdictions¹⁶

The Commonwealth of Virginia has designated the following (national) as VHF interoperability frequencies for law enforcement across the Commonwealth:

155.4750 VLAW31
155.4875 VLAW32

The Commonwealth of Virginia has designated the following as 800 MHz interoperability frequencies for law enforcement across the Commonwealth:

TX 808.0125 MHz RX 853.0125 MHz 8TAC94
TX 808.0125 MHz RX 808.0125MHz 8TAC94D

VHF Low Band, (30 – 50 MHz) Standard Squelch

39.54 TX & RX SIRS (State Interdepartmental Radio System)

Mutual Aid Frequencies by Discipline

Jurisdictions are required to obtain a license in order to use the following frequencies. Questions about programming these tones into your jurisdiction's radios should be directed to the radio manager at VITA or the Virginia Department of Health Office of Emergency Services.

VHF Low Band (30 – 50 MHz) Standard Squelch

39.46 TX & RX LAW ENFORCEMENT LLAW1

VHF High Band (150-174 MHz) Standard Squelch

154.2800	TX & RX	FIRE	VFIRE21
154.2875	TX & RX	FIRE	VFIRE25
154.2650	TX & RX	FIRE	VFIRE22
154.2725	TX & RX	FIRE	VFIRE24
154.2950	TX & RX	FIRE	VFIRE23
154.3025	TX & RX	FIRE	VFIRE26
155.3400	TX & RX	EMS	VMED28
154.3475	TX & RX	EMS	VMED29

¹⁶ The National Interoperability Field Operations Guide can be found at http://www.dhs.gov/files/publications/gc_1297699887997.shtm.

Mutual Aid Frequency

This is the designated mutual aid frequency for use across the Commonwealth.

155.205 TX & RX EMS VMED¹⁷

VHF High Band (150 – 174 MHz) CTCSS 156.7 Hz, Narrowband operation

155.7525 TX & RX	VCALL10 (Hailing Frequency)	Simplex Portable to Portable or Base to Mobile
151.1375 TX & RX	VTAC 11 (Working Frequency)	Simplex Portable to Portable or Base to Mobile
154.4525 TX & RX	VTAC 12 (Working Frequency)	Simplex Portable to Portable or Base to Mobile
158.7375 TX & RX	VTAC 13 (Working Frequency)	Simplex Portable to Portable or Base to Mobile
159.4725 TX & RX	VTAC 14 (Working Frequency)	Simplex Portable to Portable or Base to Mobile

VHF CHANNELS 10 THRU 14: 156.7 Hz CTCSS

151.1375	159.4725	136.5	VTAC 33 N = Narrowband Repeater*
154.4525	158.7375	136.5	VTAC 34 N = Narrowband Repeater*
158.7375	159.4725	136.5	VTAC 35 N = Narrowband Repeater*
159.4725	151.1375	136.5	VTAC 36 N = Narrowband Repeater*
158.7375	154.4525	136.5	VTAC 37 N = Narrowband Repeater*
159.4725	158.7375	136.5	VTAC 38 N = Narrowband Repeater*

*NOTE: FCC VHF National Interop Channels –mobiles, portables, and FB2T (Temporary repeater) operations are licensed by rule. All permanent locations (Base State) require a FCC license.

UHF (450 – 470 MHz) CTCSS 156.7 Hz, N = Narrowband Operation

TX 458.2125MHz	RX 453.2125 MHz UCALL40 (Hailing Frequency) N- Repeater
TX 453.2125 MHz	RX 453.2125 MHz UCALL40D (Hailing Frequency) N - Simplex Portable to Portable Or Base to Mobile
TX 458.4625 MHz	RX 453.4625 MHz UTAC 41 (Working Frequency) N - Repeater
TX 453.4625 MHz	RX 453.4625 MHz UTAC41D (Working Frequency) N - Simplex Portable to Portable Or Base to Mobile
TX 458.7125 MHz	RX 453.7125 MHz UTAC42 (Working Frequency) N - Repeater
TX 453.7125 MHz	RX 453.7125 MHz UTAC42D (Working Frequency) N - Simplex Portable to Portable Or Base to Mobile
TX 458.8625 MHz	RX 453.8625 MHz UTAC43 (Working Frequency) N - Repeater
TX 453.8625 MHz	RX 453.8625 MHz UTAC43D (Working Frequency) N - Simplex Portable to Portable Or Base to Mobile

*NOTE: FCC UHF National Interop Channels –mobiles and portables are licensed by rule. All permanent locations (Base State and Repeater operations) require a FCC license.

¹⁷ Nomenclature is not yet finalized for this frequency.

Frequencies (MED Channels)

Base and Mobile	Mobile Only
463.000	468 .000 MED-1
463.00625	468 .00625 MED-11
463.0125	468 .0125 MED-12
463.01875	468 .01875 MED-13
463.025	468 .025 MED-2
463.03125	468 .03125 MED-21
463.0375	468 .0375 MED-22
463.04375	468 .04375 MED-23
463.050	468 .050 MED-3
463.05625	468 .05625 MED-31
463.0625	468 .0625 MED-32
463.06875	468 .06875 MED-33
463.075	463 .075 MED-4
463.08125	468 .08125 MED-41
463.0875	468 .0875 MED-42
463.09375	468 .09375 MED-43
463.100	468 .100 MED-5
463.10625	468 .10625 MED-51
463.1125	468 .1125 MED-52
463.11875	468 .11875 MED-53
463.125	468 .125 MED-6
463.13125	468 .13125 MED-61
463.1375	468 .1375 MED-62
463.14375	468 .14375 MED-63
463.150	468 .150 MED-7
463.15625	468 .15625 MED-71
463.1625	468 .1625 MED-72
463.16875	468 .16875 MED-73
463.175	468 .175 MED-8
463.18125	468 .18125 MED-81
463.1875	468 .1875 MED-82
463.19375	468 .19375 MED-83

(From FCC Part 90 rules)

This frequency is primarily authorized for use in the dispatch of medical care vehicles and personnel for the rendition or delivery of medical services. This frequency may also be assigned for intra-system and inter-system mutual assistance purposes. For uniformity in usage these frequency pairs may be referred to by channel name as follows:

Frequencies (MED Channels)

Base and Mobile	Mobile Only
462.950	467 .950 MED-9
462.95625	467 .95625 MED-91
462.9625	467 .9625 MED-92
462.96875	467 .96875 MED-93
462.975	467 .975 MED-10
462.98125	467 .98125 MED-101
462.9875	467 .9875 MED-102
462.99375	467 .99375 MED-103

SIEC Recommended Minimum 700 MHz Interoperable Digital Radio Channels By Discipline—Law Enforcement, Fire/EMS, and Public Service

700 MHz Conventional Interoperability Channels--LAW ENFORCEMENT

Channel Name	Base TX/Mobile RX 12.5 KHz Center Frequency	Mobile TX/Base RX 12.5 KHz Center Frequency	Channel Bandwidth/Modulation/Channel Access
7CALL50	769.24375	799.24375	12.5 kHz/C4FM/\$293
7CALL50D	769.24375	769.24375	12.5 kHz/C4FM/\$293
7TAC51	769.14375	799.14375	12.5 kHz/C4FM/\$293
7TAC51D	769.14375	769.14375	12.5 kHz/C4FM/\$293
7TAC52	769.64375	799.64375	12.5 kHz/C4FM/\$293
7TAC52D	769.64375	769.64375	12.5 kHz/C4FM/\$293
7TAC53	770.14375	800.14375	12.5 kHz/C4FM/\$293
7TAC53D	770.14375	770.14375	12.5 kHz/C4FM/\$293
7TAC54	770.64375	800.64375	12.5 kHz/C4FM/\$293
7TAC54D	770.64375	770.64375	12.5 kHz/C4FM/\$293
7LAW61	770.39375	800.39375	12.5 kHz/C4FM/\$293
7LAW61D	770.39375	770.39375	12.5 kHz/C4FM/\$293
7LAW62	770.49375	800.49375	12.5 kHz/C4FM/\$293
7LAW62D	770.49375	770.49375	12.5 kHz/C4FM/\$293
7LAW81	774.00625	804.00625	12.5 kHz/C4FM/\$293
7LAW81D	774.00625	774.00625	12.5 kHz/C4FM/\$293

700 MHz Conventional Interoperability Channels--FIRE/EMS

Channel Name	Base TX/Mobile RX 12.5 KHz Center Frequency	Mobile TX/Base RX 12.5 KHz Center Frequency	Channel Bandwidth/Modulation/Channel Access
7CALL50	769.24375	799.24375	12.5 kHz/C4FM/\$293
7CALL50D	769.24375	769.24375	12.5 kHz/C4FM/\$293
7TAC51	769.14375	799.14375	12.5 kHz/C4FM/\$293
7TAC51D	769.14375	769.14375	12.5 kHz/C4FM/\$293
7TAC52	769.64375	799.64375	12.5 kHz/C4FM/\$293
7TAC52D	769.64375	769.64375	12.5 kHz/C4FM/\$293
7TAC53	770.14375	800.14375	12.5 kHz/C4FM/\$293

7TAC53D	770.14375	770.14375	12.5 kHz/C4FM/\$293
7TAC54	770.64375	800.64375	12.5 kHz/C4FM/\$293
7TAC54D	770.64375	770.64375	12.5 kHz/C4FM/\$293
7FIRE63	769.89375	799.89375	12.5 kHz/C4FM/\$293
7FIRE63D	769.89375	769.89375	12.5 kHz/C4FM/\$293
7FIRE64	769.99375	799.99375	12.5 kHz/C4FM/\$293
7FIRE64D	769.99375	769.99375	12.5 kHz/C4FM/\$293
7MED65	769.39375	799.39375	12.5 kHz/C4FM/\$293
7MED65D	69.39375	769.39375	12.5 kHz/C4FM/\$293

700 MHz Conventional Interoperability Channels--PUBLIC SERVICE

Channel Name	Base TX/Mobile RX 12.5 KHz Center Frequency	Mobile TX/Base RX 12.5 KHz Center Frequency	Channel Bandwidth/Modulation/Channel Access
7CALL50	769.24375	799.24375	12.5 kHz/C4FM/\$293
7CALL50D	769.24375	769.24375	12.5 kHz/C4FM/\$293
7TAC51	769.14375	799.14375	12.5 kHz/C4FM/\$293
7TAC51D	769.14375	769.14375	12.5 kHz/C4FM/\$293
7TAC52	769.64375	799.64375	12.5 kHz/C4FM/\$293
7TAC52D	769.64375	769.64375	12.5 kHz/C4FM/\$293
7TAC53	770.14375	800.14375	12.5 kHz/C4FM/\$293
7TAC53D	770.14375	770.14375	12.5 kHz/C4FM/\$293
7TAC54	770.64375	800.64375	12.5 kHz/C4FM/\$293
7TAC54D	770.64375	770.64375	12.5 kHz/C4FM/\$293
7GTAC57	770.99375	800.99375	12.5 kHz/C4FM/\$293
7GTAC57D	770.99375	770.99375	12.5 kHz/C4FM/\$293
7GTAC77	774.85625	804.85625	12.5 kHz/C4FM/\$293
7GTAC77D	774.85625	774.85625	12.5 kHz/C4FM/\$293
7MOB59	770.89375	800.89375	12.5 kHz/C4FM/\$293
7MOB59D	770.89375	770.89375	12.5 kHz/C4FM/\$293

800 MHz, CTCSS 156.7 Hz, (Pre-Rebanding)

TX 821.0125 MHz	RX 866.0125 MHz	8CALL90
TX 821.0125 MHz	RX 821.0125 MHz	8CALL90D
TX 821.5125 MHz	RX 866.5125 MHz	8TAC91
TX 821.5125 MHz	RX 821.5125 MHz	8TAC91D
TX 822.0125 MHz	RX 867.0125 MHz	8TAC92
TX 822.0125 MHz	RX 822.0125 MHz	8TAC92D
TX 822.5125 MHz	RX 867.5125 MHz	8TAC93
TX 822.5125 MHz	RX 822.5125 MHz	8TAC93D
TX 823.0125 MHz	RX 868.0125 MHz	8TAC94
TX 823.0125 MHz	RX 823.0125 MHz	8TAC94D

800 MHz, CTCSS 156.7 Hz, (Post REBANDING)

TX 806.0125 MHz	851.0125 MHz	8CALL90
TX 806.0125 MHz	806.0125 MHz	8CALL90D
TX 806.5125 MHz	851.5125 MHz	8TAC91
TX 806.5125 MHz	806.5125 MHz	8TAC91D
TX 807.0125 MHz	852.0125 MHz	8TAC92
TX 807.0125 MHz	RX 807.0125MHz	8TAC92D
TX 807.5125 MHz	RX 852.5125 MHz	8TAC93
TX 807.5125 MHz	RX 807.5125 MHz	8TAC93D
TX 808.0125 MHz	RX 853.0125 MHz	8TAC94
TX 808.0125 MHz	RX 808.0125MHz	8TAC94D

Sources:

More information on the National Interoperable Field Operations Guide can be found at:
http://www.dhs.gov/files/publications/gc_1297699887997.shtm

More information on channel naming can be found at:
<http://www.npstc.org/channelNaming.jsp>

More information on channel naming nomenclature can be found at:
http://www.npstc.org/documents/IO_0060C_20090615_Standard_Channel_Nomenclature.pdf

Appendix G – Information-Sharing Project

Background Narrative

In addition to achieving voice communications interoperability Virginia's 2012 Statewide Communications Plan is also addressing the urgent need to enhance and enable data interoperability and information sharing as a critical goal. To achieve this the Statewide Interoperability Coordinator is working with the SIEC's Information Sharing Working Group (ISWG) I to develop a Statewide Plan for Information Sharing (the Plan) that will provide policies, plans and procedures to jurisdictions and agencies throughout the Commonwealth to be able to seamlessly and efficiently share information with the right people at the right time. This Plan will be included as an appendix to the 2012 SCIP by no later than the end of the summer 2012.

The Critical Importance of Information Sharing

In many ways information products are the most significant products produced by government. Government agencies, at all levels are increasingly dependent upon having reliable and timely information to make informed decisions. Having thorough information is a key factor in the ability of government to provide effective and efficient services to the public. It is also key to building a trusted relationship with citizens.

Nowhere is this more important than in the public safety arena where having timely and trusted information is critical to protecting and preserving the lives, property and environment of the citizens of the Commonwealth. Over the last ten years the number of declared natural disasters in the United States has increased steadily from 45 in 2001 to 98 in 2011. Not only has there been over double the number of disasters but the monetary impact of the disasters has also dramatically increased with 2011 experiencing 1 incident at a cost of over \$1 billion nearly every month of the year. According to the National Oceanic and Atmospheric Administration as of September 2011 there have been more than 700 disaster and weather related deaths. These are just for major events and don't take into account emergency events that occur with even more frequency. Alarming the Commonwealth averages over 45 major events a year – 10 over the national average. And the forecast for 2012 is for these numbers to increase.

While there is little we can do to affect natural disasters, we can certainly improve our preparation, response, recovery and mitigation to those events. A critical part of that is for planners, operators and all those involved in all phases of preparedness, response, recovery and mitigation in all hazards environment to have the information they need, in the form they need it and when they need it to improve planning and enhance their decision making capabilities. That information doesn't "sit" in any one place; it comes from multiple sources which puts a premium on the importance of information sharing.

The Statewide Plan for Information Sharing (the Plan)

It is for this reason that the ISWG is developing the Statewide Plan Information Sharing. It is important to note up front that the Plan will not dictate the development or use of a single information sharing technical capability that will be a replacement for the existing information systems that agencies use on a day-to-day basis. Nor will the VIISE require jurisdictions to give up control over their own data. Instead the Plan will be “engineered” to build from and leverage already existing capabilities and to share their data under appropriate circumstances.

An initial vision for the Plan is comprised of two parts:

1. The Plan will enhance the knowledge base, situational awareness and decision making capabilities of government agencies by enabling jurisdictions and agencies to obtain the information they need, when they need it and in the form they need it while protecting security, privacy and civil liberties.
2. The Plan will enhance the ability of government jurisdictions and agencies to inform and engage the citizens of the Commonwealth through the provision of better and more transparent information, as well as improving the ability of the public to provide information to the government.

In essence, the Plan can be best described as the “rules of the road” that will enable agencies to seamlessly and securely share information and will include the development and adoption of appropriate governance structures, policies and procedures, the identification and adoption of standards and best technical practices. As stated above, the Plan will not be developed in a vacuum; it will be developed with the guidance and direction of the Information Sharing Working Group and based on the best input that can be obtained jurisdictions across the Commonwealth. The Plan will be released as an appendix to the SCIP in 2012.

Finally it is important to note that the first Phase of the development of the Plan is meant to fill the gap in existing information sharing strategies in so far as it pertains to non sensitive information. Future appendices of the Plan will address issues pertaining to sensitive and/or classified information and will be consistent with the National Strategies being pursued by the Federal government.

Guidelines and Principles

The following are some of the guidelines and the principles that will be used by the Information Sharing Working Group in the creation of the Plan.

- **Interoperability Continuum**: As is the case in establishing voice based communications interoperability the Interoperability Continuum will be used as a tool to both develop the plan and measure progress to reaching the plan. (see page 8 for more information on the Continuum)
- **Stakeholder Driven**: All of the elements of the Plan will be determined with and through the consultation of state and local government stakeholders through the ISWG. In this way the plan will reflect the realities of the state of affairs in the

Commonwealth and the best means to meet the information sharing goals and objectives.

- System of systems: The plan will focus on leveraging the already millions, if not billions of dollars in investments in existing systems and is not oriented towards replacing any of those systems or to create a single system. Instead, much like the SCIP for interoperable voice communications the Plan will outline the means to create a decentralized, distributed and coordinated information sharing architecture.
- No single point of failure: Given the important role of the Internet and web services in information sharing the plan will address the importance of redundancy and resilience. Thus the Plan will provide guidance for enabling and ensuring direct and continuous online electronic access to information but provides for a default in the event Internet access is denied
- Data owners control their data: The Plan will ensure that data owners maintain control of their own data which is critical for legal, security and privacy reasons.
- Quantifiable Goals: The Plan will have quantifiable goals to achieve financial efficiencies across state and local governments.
- User Interface: The Plan develop approaches that will facilitate the availability of information in a form and manner that is useful to the individual users.
- Data Access/Security: The VIISE will employ an information access management approach that facilitates access to data, rather than just systems and networks without sacrificing security
- Adaptability: As mentioned above the Plan will not “dictate” the development or use of a single technological approach. Instead the Plan will ensure that agencies and jurisdictions are able to be adaptable to changing needs and technologies through the adoption of agreed upon common standards, open architectures and certification and accreditation policies
- Sustainability: Must be sustainable
- Privacy and Civil Liberties: The Plan will provide for maintaining the privacy and civil liberties of all citizens.
- Transparency: The Plan will incorporate mechanisms and methods to enhance accountability and oversight

Conclusion

The drafting of the Information Sharing Strategic Plan will take place over the next six months and, as previously stated, will be guided by the Information Sharing Working Group. The Plan will address key issues including, but not limited to, Technology Architectures, Data Standards and Governance and will provide specific goals, objectives, initiatives, milestones and timelines to achieve information interoperability by 2015.

It is important to note that as a part of the SCIP, that the development or improvement of any information systems throughout the state that uses state and/or federal resources will need to be consistent with the Plan. All grant proposals that are issued through the state will be judged against the plan

The key to the success of this critical issue is to have as broad based participation in the process as possible. Towards that end if you are interested in participating please contact Emily Nuñez at the Office of the Virginia Interoperability Coordinator Emily.Nunez@governor.virginia.gov or Dan Widner, Chair of the ISWG at Dan.widner@vita.virginia.gov to facilitate involvement.

Appendix H: Additional Resources

Office of Veterans Affairs and Homeland Security Web Sites

- <http://www.vahs.virginia.gov/index.cfm>
- <http://www.vahs.virginia.gov/Initiatives/Interoperability>

800 MHz Rebanding

- 800 MHz Transition Administrator (<http://www.800ta.org/default.asp>)

Communications Spectrum

Federal agencies that manage the commercial and public communications spectrum:

- Federal Communications Commission (<http://wireless.fcc.gov/publicsafety>)
- National Telecommunications and Information Administration (www.ntia.doc.gov)

Federal Interoperability General Information

- AGILE Program (www.ojp.usdoj.gov)
- National Incident Management System (NIMS) training (<http://training.fema.gov/EMIWEB/IS/is700.asp>)
- National Law Enforcement and Corrections Technology Center (<http://www.justnet.org/Pages/home.aspx>)
- SAFECOM (www.safecomprogram.gov)
- National Institute of Standards and Technology (www.nist.gov)
- SEARCH (www.search.org)
- National Public Safety Telecommunications Council (<http://www.npstc.org/index.jsp>)
- National Interoperability Field Operations Guide (NIFOG) (http://www.npstc.org/documents/NIFOG_1_3.pdf)

Grants Information

- Access to federal Grant Opportunities (<http://www.grants.gov/>)
- Department of Homeland Security (<http://www.dhs.gov/xopnbiz/>)
- National Institute of Justice (<http://www.ojp.usdoj.gov/nij/funding/welcome.htm>)
- Office of Community Oriented Policing Services (www.cops.usdoj.gov)
- Public Safety Interoperable Communications (PSIC) Grant Program (<http://www.ntia.doc.gov/psic/>)

Local Public Safety Organizations

- Hampton Roads Planning District Commission (<http://www.hrpdc.org/>)
- Metropolitan Washington Airport Authority (<http://www.metwashairports.com/>)
- Virginia Association of Chiefs of Police (www.vachiefs.org)
- Virginia Association of Counties (<http://www.vaco.org/>)

- Virginia Association of Governmental EMS Administrators (www.vagemsa.org)
- Virginia Association of Public Safety Communications Officials (<http://www.virginia-apco.org/>)
- Virginia Association of Volunteer Rescue Squads (<http://www.vavrs.com/default2.cfm>)
- Virginia Fire Chiefs Association (www.sfcav.org)
- Virginia Hospital and Healthcare Association (<http://www.vhha.com/>)
- Virginia Information Technologies Agency (<http://www.vita.virginia.gov/>)
- Virginia Municipal League (<http://www.vml.org/>)
- Virginia Professional Firefighters Association (<http://www.vpff.org/>)
- Virginia Sheriffs' Association (www.virginiasheriffs.org)
- Virginia Wireless E-911 Services Board (<http://www.911.virginia.gov/index.html>)

Narrowbanding

- Federal Communications Commission (<http://www.fcc.gov/>)

State Partners

- Virginia Department of Criminal Justice Services (<http://www.dcjs.virginia.gov/>)
- Virginia Department of Emergency Management (www.vaemergency.com)
- Virginia Department of Fire Programs (www.vafire.com)
- Virginia Department of Forestry (<http://www.dof.virginia.gov/>)
- Virginia Department of Game and Inland Fisheries (<http://www.dgif.virginia.gov/>)
- Virginia Department of Health (<http://www.vdh.state.va.us/>)
- Virginia Department of Rail and Public Transportation (<http://www.drpt.virginia.gov/>)
- Virginia Department of Transportation (http://www.virginiadot.org/default_flash.asp)
- Virginia National Guard (<http://www.virginiaguard.com/>)
- Virginia Office of the Secretary of Public Safety (<http://www.publicsafety.virginia.gov/index.cfm>)
- Virginia Office of the Secretary of Technology (<http://www.technology.virginia.gov/>)
- Virginia Port Authority (<http://www.vaports.com/>)
- Virginia STARS (www.publicsafety.virginia.gov/Initiatives/STARS.cfm)
- Virginia State Firefighters Association (<http://www.vsfafa.org/>)
- Virginia State Police (www.vsp.state.va.us)

Technology and Standards Information

Standards bodies working to promote interoperable communications technology:

- Association of Public-Safety Communications Officials, International (www.apointl.org)
- Capital Wireless Information Net (CapWIN) (www.capwin.org)
- Institute of Electrical and Electronics Engineers (www.ieee.org)
- International Telecommunication Union (www.itu.int)
- National Institute of Justice's Technology Programs (<http://www.ojp.usdoj.gov/nij/topics/technology/welcome.htm>)
- National Institute of Standards and Technology (www.nist.gov)
- Project 25 (www.project25.org)
- Project Mobility for Emergency and Safety Applications (MESA) (www.projectmesa.org)
- Telecommunications Industry Association (www.tiaonline.org)

Appendix I: State Interoperability Coordinator (SWIC)

Chris McIntosh

Statewide Interoperability Coordinator (SWIC)
Office of Veterans Affairs and Homeland Security

Office of the Governor
10501 Trade Court
Richmond, VA 23236
(804) 897-9837 (office)
804-363-5794 (mobile)
804-897-6536 (fax)
chris.mcintosh@governor.virginia.gov
<http://www.vaah.virginia.gov/Initiatives/Interoperability/>.

Appendix J: Commonwealth of Virginia Tactical Interoperable Communications Field Operations Guide

Commonwealth of Virginia Tactical Interoperable Communications Field Operations Guide



Version 1.0 December 2011



Letter of Introduction

The Commonwealth of Virginia Tactical Interoperable Communications Field Operations Guide (TICFOG) is a collection of technical reference material to aid Communications Unit personnel in establishing solutions to support communications during emergency incidents and planned events. The Commonwealth of Virginia TICFOG includes information from the Commonwealth of Virginia Tactical Interoperable Communications Plan (TICP) and data from other Commonwealth of Virginia communications documents; formatted as a pocket-sized guide.

The Commonwealth of Virginia TICFOG contains local, territory, and national interoperability channels. These channels should be programmed into all public safety radios in the appropriate frequency band. If geographic restrictions on some channels preclude their use within the Commonwealth of Virginia, they may offer an interoperability option when responding out of territory where the restrictions do not apply.

Please send updates, corrections, or comments about the Commonwealth of Virginia TICFOG or requests for additional copies to Patrick Cox.

Thank you,

Patrick Cox

For Official Use Only

Commonwealth of Virginia
TICFOG

For Official Use Only

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About this Guide

Points of Contact for this Guide

Agency:	Virginia Department of Emergency Management (VDEM)
Title:	Strategic Reserve Manager
Address:	10501 Trade Court, Richmond, VA 23236
24/7 Phone:	804 674 2400

The purpose of the Commonwealth of Virginia Tactical Interoperable Communications Field Operations Guide (TICFOG) is to be used to increase efficiency in establishing interoperable communications during incidents, create a consistent knowledge base of interoperable communications channels and networks, and provide a helpful tool for pre-planning and interoperable communications training and exercises.

Please send updates, corrections, or comments about the Commonwealth of Virginia TICFOG to Patrick Cox.

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Interoperable Communications Commonalities

Common Issues

1. Incident using radio channels in more than one band (VHF, UHF, and/or 700/800 MHz)
2. Incident using different radio bands via console or gateway patches
3. Unable to communicate critical information due to radio congestion
4. Unfamiliar with radio system(s) or assigned radio functionality
5. Instructions and assignments not clear
6. Have no or inadequate communication with your crew members or supervisor
7. Dispatch to dispatch channel patching
8. Inadequate number of tactical channels available or assigned
9. Multiple conversations on the same talk group or channel
10. Ensure that the radio system that you are using for interoperability completely supports the incident with good radio coverage
11. High level of background noise (i.e., wind, generators, power tools, fire pumps)
12. Emergency button activation – who is receiving the notification, who is authorized to clear
13. Multiple agencies performing radio programming at the incident

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14. Organizations in the system do not use the same vocabulary

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15. Mobile gateway devices being used in a strategic (wide-area) rather than tactical (local) environment
16. Multiple mobile gateways available at the incident
17. Responding agencies have not identified a single Communications Unit Leader for the incident
18. Working in the deep interior of a building, parking garage, or underground

AGENCY RESPONSIBILITIES AND RIGHTS

Agencies will retain the following responsibilities and rights:

- Agencies are responsible for complying with MOUs and Agreements developed through the Commonwealth of Virginia in coordination with their respective jurisdictions.
- Authorized representatives of agencies participating in this plan have the authority to request the use of equipment, including systems and mobile assets, in accordance with Standard Operating Procedures (SOPs).
- Where applicable, agencies will be responsible for consistently maintaining, testing, and exercising connectivity to interoperable communications.
- Incident Commanders retain the right to decide how to utilize interoperable communications.

**PRIORITIZATION AND SHARED USE OF
REGIONAL INTEROPERABILITY ASSETS**

The Incident Commander, or designee, in conjunction/cooperation with their counterparts in other involved agencies, will have the authority to request the use of interoperable assets. Once Incident Command has been established, Command Staff or the Communications Unit Leader (when designated) direct the further coordination and delegation of the interoperable communications assets assigned to the event or incident in question.

When the same resources are requested for two or more incidents, resource assignments should be based on the priority levels in accordance with the National Incident Management System (NIMS).

In the event of multiple simultaneous incidents within the same priority, the resources should be allocated according to NIMS.

In response to events or incidents which cross over jurisdictional boundaries, there potentially could be competing demands and priorities for interoperable communications assets.

Agencies should activate needed interoperable assets to respond effectively and to minimize any negative impact on surrounding agencies or jurisdictions. Specifically, interoperable communications should be established with the following techniques, listed in increasing order of complexity:

1. Utilize *face-to-face* communications wherever appropriate. For example, the co-location of all

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Command and General Staff at the Incident Command Post (ICP) provides the best direct communications and reduces the demand on interoperability resources

2. Employ local communications assets until such time as either those assets become taxed or inadequate based on the nature and/or scope of the incident
3. If response agencies are users of a shared system, utilize that shared system to establish interoperable communications
4. If response agencies operate on disparate systems, utilize shared or mutual aid channels to establish interoperable communications.
5. If response agencies do not share systems or channels, utilize a gateway solution to establish interoperable communications
6. Where interoperable communications cannot otherwise be established between response agencies, utilize swap or cache radios to establish operable communications for responders
7. If no other method of interoperability can be established, relay communications through staff members

When the same resources are requested for two or more incidents, resource assignments should be based on the priority levels listed below:

1. Disasters, large scale incidents, or extreme emergencies requiring mutual aid or interagency communications
2. Incidents where imminent danger exists to life or property
3. Incidents requiring the response of multiple agencies

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4. Pre-planned events requiring mutual aid or interagency communications
5. Incidents involving a single agency where supplemental communications are needed for agency use
6. Drills, tests and exercises

In the event of multiple simultaneous incidents within the same priority level, the Incident Commander or Unified Command (if formed) shall have allocation authority and shall allocate resources with the following priorities in mind:

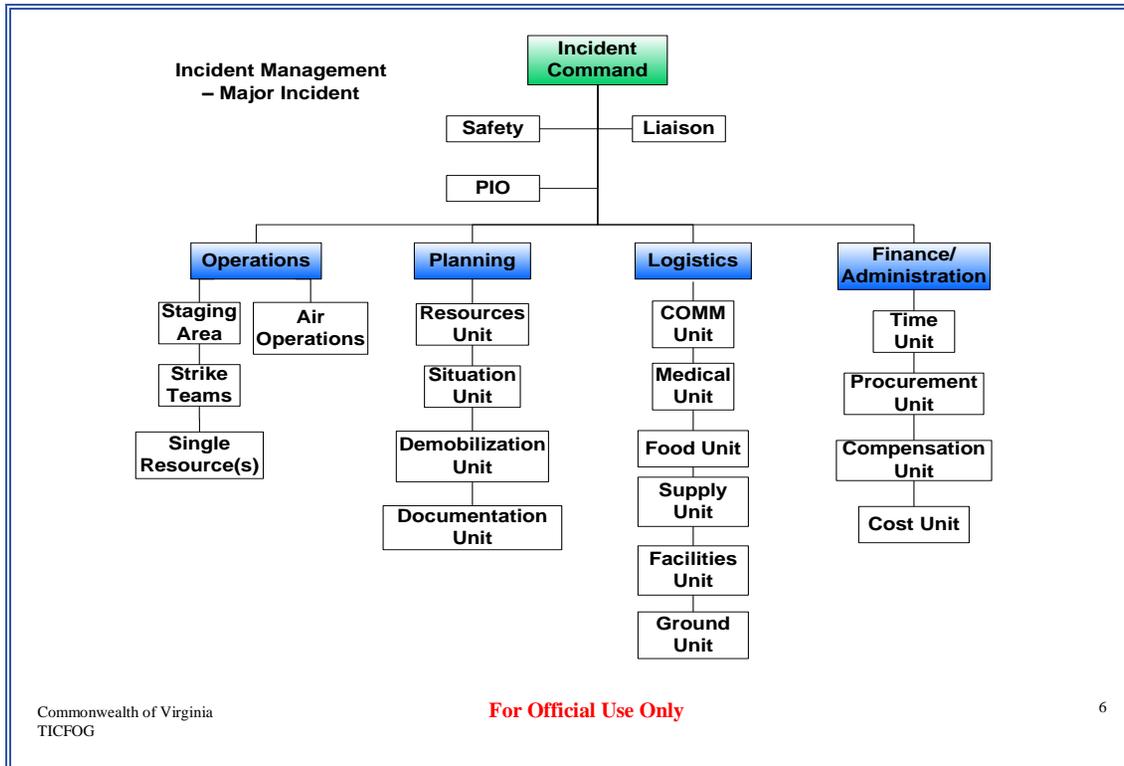
1. Incidents with the greatest level of exigency (e.g., greater threat to life or property, more immediate need, etc.) have priority over less exigent incidents
2. Agencies with single/limited interoperable options have priority use of those options over agencies with multiple interoperable options

When at all possible, agencies already using an interoperable asset during an event should not be redirected to another resource.

INCIDENT COMMAND SYSTEM (ICS)

ICS is a key feature of NIMS. It is a widely applicable management system designed to enable effective, efficient incident management by integrating a combination of facilities, equipment, personnel, procedures and communications operating with a common organizational structure. ICS is used to organize on-scene operations for a broad spectrum of incidents/events and guides the process for planning, building and adapting that structure. ICS is based on the command principles of unity of command, chain of command, span of control, delegation of authority and division of labor. The five major functional areas of ICS are command, operations, planning, logistics and finance/administration. The Incident Management – Major Incident flow can be found on the following page.

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POSITION DESCRIPTIONS

At an Incident/Event

The Communications Unit is in the Service Branch of the Logistics Section of the ICS. Listed below are the Communication Unit Organization position titles and responsibilities.

Communications Unit Leader (COML) –Manages the technical and operational aspects of the Communications Function during an incident or event. Develops National Incident Management System (NIMS)/Incident Command System (ICS) Form 205 Incident Radio Communications Plan and supervises the communication unit.

Incident Communications Technician (COMT) – Deploys advanced equipment and keeps it operational throughout the incident/event.

Technical Specialist (THSP) – Allows for the incorporation of personnel who may not be formally certified in any specific NIMS/ICS position. THSPs may include Local Agency Radio Technicians (as opposed to the COMT), Telephone Specialists, Gateway Specialists, Data/IT Specialists, and or Cache Radio Specialists.

Incident Communications Center Manager (INCM) – Supervises the operational aspects of the Incident Communications Center (ICC) (Mobile Unit and/or Fixed Facility). During an incident, the ICC is designed to absorb incident traffic in order to separate that traffic from the day-to-day activities of the dispatch center. The ICC is typically located at the Incident Command Post (ICP) in a fixed site, tent, trailer, mobile communications unit.

Radio Operator (RADO) - Staffs a radio at the ICC and is responsible for documenting incoming radio and telephone messages. Incident Dispatchers or Tactical Dispatchers are used as RADOs.

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Dispatch Center or Emergency Operations Center (EOC)
Communications Coordinator (COMC) – The COML will work with the COMC to coordinate communications with other dispatch centers and the incident communication plan. Locally, the jurisdictional dispatch center supervisor or dispatcher will act as the Communications Coordinator. Coordinators may also be located at the county, region, state, and/or federal level.

ICS PERSONNEL COMMON RESPONSIBILITIES

The following is a checklist applicable to all ICS personnel.

- a. Receive assignment from your agency, including:
 - 1. Job assignment, e.g., Strike Team designation, overhead position, etc.
 - 2. Resource order number and request number
 - 3. Reporting location
 - 4. Reporting time
 - 5. Travel instructions
 - 6. Any special communications instructions, e.g. travel channel
- b. Upon arrival at the incident, check in at designated Check-in location. Check-in may be found at:
 - 1. Incident Command Post
 - 2. Base or Camps
 - 3. Staging Areas
 - 4. Helibases
 - 5. If you are instructed to report directly to a line assignment, check in with the Division/Group Supervisor
- c. Receive briefing from immediate supervisor.
- d. Acquire work materials.
- e. Conduct all tasks in a manner that ensures safety and welfare of you and your co-workers.
- f. Organize and brief subordinates.
- g. Know the assigned channel(s) for your area of responsibility and ensure that communication equipment is working properly
- h. Use clear text and ICS terminology (no codes) in all radio communications. All radio communications to the Incident Communications

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Center will be addressed: “(Incident Name) Communications”, e.g., “Webb Communications”.

AREA COMMANDER POSITION CHECKLIST

The Area Commander is responsible for the overall direction of incident management teams assigned to the same incident or to incidents in close proximity. This responsibility includes ensuring that conflicts are resolved, compatible incident objectives are established and strategies are selected for the use of critical resources. Area Command also has the responsibility to coordinate with local, state, federal, and volunteer organizations and agencies that are operating within the Area.

- a. Obtain briefing from the agency executive(s) on agency expectations, concerns, and constraints
- b. Obtain and carry out delegation of authority from the agency executive for overall management and direction of the incidents within the designated Area Command
- c. If operating as a Unified Area Command, develop working agreement for how Area Commanders will function together
- d. Delegate authority to Incident Commanders based on agency expectations, concerns, and constraints
- e. Establish an Area Command schedule and timeline
- f. Resolve conflicts between incident “realities” and agency executive “wants”
- g. Establish appropriate location for the Area Command facilities
- h. Determine and implement an appropriate Area Command organization
- i. Determine need to Technical Specialists to support Area Command

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- j. Obtain incident briefing and Incident Action Plans from Incident Commanders
- k. Assess incident situations prior to strategy meetings
- l. Conduct a joint meeting with all Incident Commanders
- m. Review objectives and strategies for each incident
- n. Periodically review critical resource needs
- o. Maintain a close coordination with the agency executive
- p. Establish priorities for use of critical resources
- q. Review procedures for interaction within the Area Command
- r. Approve Incident Commanders' requests for and release of critical resources
- s. Coordinate and approve demobilization plans
- t. Maintain log of major actions/decisions

INCIDENT COMMANDER POSITION CHECKLIST

The Incident Commander's responsibility is the overall management of the incident. On most incidents, a single Incident Commander carries out the command activity; however, Unified Command may be appropriated. The Incident Commander is selected by qualifications and experience.

The Incident Commander may have a Deputy, who may be from the same agency, or from an assisting agency. Deputies may also be used at section and branch levels of the ICS organization. Deputies must have the same qualifications as the person for whom they work for, as they must be ready to take over that position at any time.

- a. Review Common Responsibilities (Section 0)
- b. Assess the situation and/or obtain a briefing from the prior Incident Commander
- c. Determine Incident objectives and strategy
- d. Establish the immediate priorities
- e. Establish an Incident Command Post
- f. Consider the need for Unified Command
- g. Establish an appropriate organization
- h. Ensure planning meetings are scheduled as required
- i. Approve and authorize the implementation of an Incident Action Plan
- j. Ensure that adequate safety and personnel accountability measures are in place
- k. Coordinate activity for all Command and General Staff
- l. Coordinate with key people and officials

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- m. Approve requests for additional resources or for the release of resources

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- n. Keep agency administrator informed of incident status
- o. Approve the use of trainees, volunteers, and auxiliary personnel
- p. Authorize release of information to the news media
- q. Ensure Incident Status Summary (ICS Form 209) is completed and forwarded to appropriate higher authority
- r. Order the demobilization of the incident when appropriate
- s. Maintain Unit/Activity Log (ICS Form 214)

COMMUNICATIONS UNIT LEADER (COML)
POSITION CHECKLIST

TASK

1. Obtain briefing from the Logistics Section Chief or Service Branch Director
2. Organize and staff unit as appropriate
 - a. Assign Communications Center Manager and Lead Incident Dispatcher
 - b. Assign Message Center Manager and ensure adequate staff is assigned to answer phones and attend to fax machines
3. Assess communications systems/channels in use; advise on communications capabilities/limitations
4. Develop and implement effective communications procedures (flow) internal and external to the incident/Incident Command Post.
5. Assess Incident Command Post phone load and request additional lines as needed
6. Obtain copy of Communications Resource Availability Worksheet (ICS Form 217A) which provides RF information for the applicable area. If ICS Form 217A has not been completed or is unavailable, it should be prepared).
7. Prepare and Implement Incident Communications Plan (ICS Form 205):
 - a. Obtain current organizational chart
 - b. Determine most hazardous tactical activity; ensure adequate communications
 - c. Make communications assignments to all other Operations elements, including volunteer, contract, or mutual aid
 - d. Determine command communications needs

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- e. Establish and post any specific procedures for use of Incident Command Post communications equipment
8. Include cellular phones and pagers in Incident Communications Plan (ICS Form 205T) if appropriate:
 - a. Determine specific organizational elements to be assigned to telephones
 - b. Identify all facilities/locations with which communications must be established (shelters, press area, liaison area, agency facilities, other governmental entities' Emergency Operations Center [EOCs], etc.), and identify and document phone numbers
 - c. Determine which phones and what numbers should be used by specific personnel and their purpose. Assign specific telephone numbers for incoming calls, and report these numbers to staff and off-site parties such as other local jurisdictions, state and federal agencies
 - d. Do not publicize OUTGOING call lines
9. Activate, serve as contact point, and supervise the integration of volunteer radio organizations into the communications system
10. Ensure radio and telephone logs are available and being used
11. Determine need and research availability of additional nets and systems:
 - a. Order through Supply Unit after approval by Section Chief or appropriate official
 - b. Federal systems
 - c. Additional radios and other communications devices, including repeaters, radio-telephone interconnects and satellite down-link capabilities

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may be available through VDEM, FEMA or the
National Interagency Fire Center (NIFC)

12. Document malfunctioning communications equipment,
facilitate repair

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13. Establish and maintain communications equipment accountability system
14. As required, provide technical information regarding:
 - a. Adequacy of communications system currently in use
 - b. Geographic limitations of communications equipment
 - c. Equipment capabilities
 - d. Amount and types of equipment available
 - e. Anticipated problems in the use of communications equipment
15. Estimate Unit needs for expected operations
16. As required, request relief personnel
17. Provide briefing to relief personnel on current activities and unusual situations
18. Document all activity on Unit/Activity Log (ICS Form 214)

REQUESTS FOR COMMUNICATIONS ASSETS

1. An agency needing support of a communications asset will contact their local dispatch center.
2. The local dispatch center will contact the Commonwealth of Virginia EOC (VEOC) and make the request. The VEOC will open a mission and start official documentation of the incident
3. The VEOC will contact the closest and most appropriate Commonwealth or local asset that can support the request, determine the availability and estimated time of deployment. This will normally be routed through the local EMA
4. The VEOC will then report the response information back to the requesting dispatch center

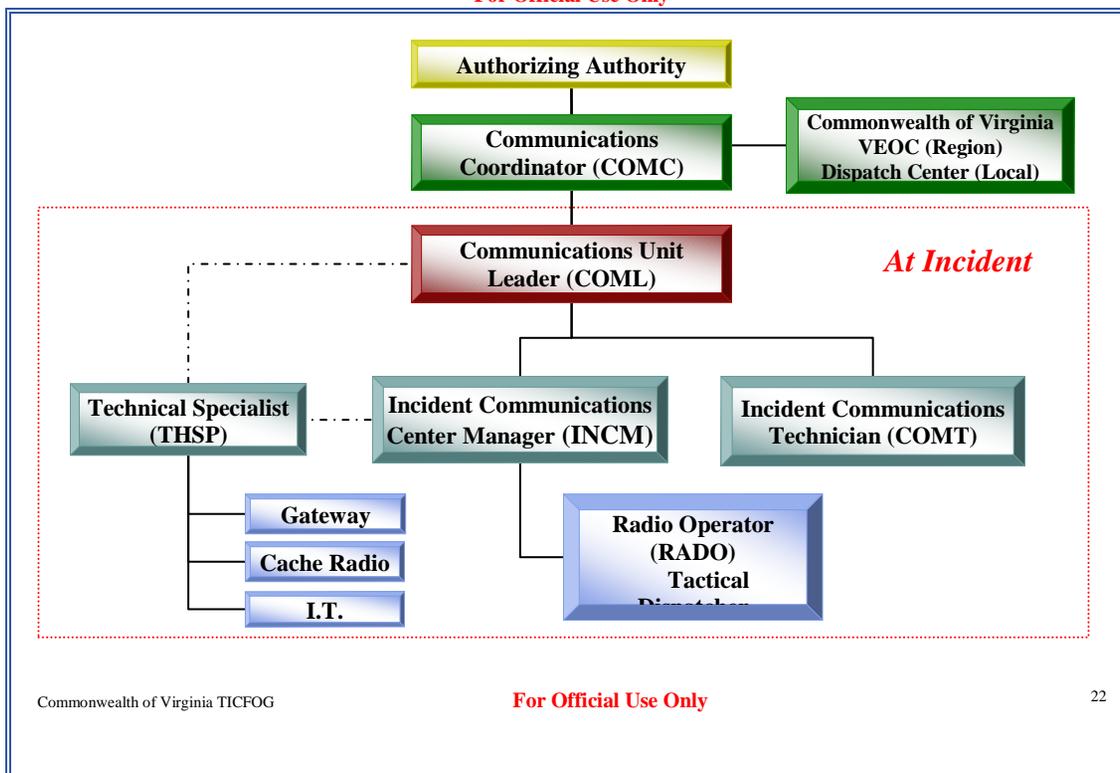
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5. The VEOC will verify that the responding asset, the requesting jurisdiction dispatch center, and the on-scene commander all have a common mutual aid channel
6. The responding asset will coordinate with Incident Command for staging of the asset or to determine a reporting location

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7. The responding communications asset will establish communications with the VEOC once on scene (applies to State deployed assets)
8. The IC will designate a Communications Unit Leader (COML) who will prepare an Incident Radio Communications Plan (ICS Form 205). The ICS 205 will be provided to the Communications asset. The Communications Plan will also include phone numbers for incident personnel and other significant locations
9. If necessary, the IC will designate law enforcement personnel to provide security at the site of the Communications asset
10. The communications asset will rapidly prepare to activate interoperable communications necessary to support on-scene incident personnel
11. The communications asset will have a cache of 700/800 MHz, VHF (low and high band), and UHF portable radios to issue to incident personnel if necessary
12. The communications asset should be prepared to remain on scene staffed by trained communications personnel until released by the Incident Commander or designee

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Interoperability Assets

Refer to regional Standard Operating Procedures (SOPs) for policies and procedures on asset usage.

GENERAL RULES OF USE

- **National Incident Management System** – Implement an Incident Command System (ICS) compliant with the National Incident Management System (NIMS) when using any regional interoperability resource.
- **National Response Framework** – Use the appropriate ICS forms needed to document a given incident, in accordance with the National Response Framework (NRF).
- **Plain Language** – Avoid using radio codes, acronyms, and abbreviations as they may cause confusion between agencies. Ensure that all verbal requests for assistance or backup specify the reason for the request.
- **Unit Identification** – Announce your home agency prior to announcing your unit identifier during interoperable communication situations. (i.e., “Command, this is Henrico County Ambulance 26”)

Applies to Gateways

- **Encryption** – All encrypted radio users must operate in a “clear” mode when a gateway is used, unless otherwise arranged in advance. **Never assume encryption carries across the gateway.**
- **Patching** – Gateway devices should not patch Federal Communication Commission (FCC) frequencies to Military frequencies

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- **Monitoring** – The Incident Commander, or their designee, will ensure that each activated patch is monitored consistently while in use.
- **Technical Support** – Qualified gateway technical specialists (THSPs) or communications technicians (COMTs) must be available for on-scene support during the deployment of mobile gateways.

Applies to Radio Caches

- **Charging** – Cache radios must be fully charged and ready for immediate deployment when requested. Deployed equipment includes extra batteries and/or battery chargers to support extended deployments.
- **Radio Identification** - Each radio in a radio cache will have a unique identification number (e.g., serial number, etc.) for inventory tracking.
- **Technical Support** – Qualified radio cache THSPs or COMTs must be available for on-scene support during the deployment, if the requesting agency cannot act in this capacity.
- **Equipment Return** – The requesting agency is responsible for the return of any cache radios/MCUs/equipment in the condition that they were issued/received. Responsibilities for lost or damaged equipment lie with the appropriate agency as dictated by existing Memoranda of Agreement (MOAs).

Applies to Mobile Command Units (MCUs)

- **Equipment Return** – The requesting agency is responsible for the return of any MCU in the condition that it was received and/or as dictated by existing Memoranda of Agreement (MOAs).

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- **Resource Modifications** – The requesting agency is not allowed to change anything in the MCU without written permission of the owning agency. Should a modification need to be made, (i.e., changing an electric end) the requesting agency will incur costs of any modification/restoration.
- **Operational Expenses** – Responsibility for operational expenses should be decided upon ahead of time or within an MOU.

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SHARED CHANNELS

The convention calls for frequency lists to show four digits after the decimal place, followed by either an “N” or a “W”, depending on whether the frequency is narrow or wide band. Mode refers to either “A” or “D” indicating analog or digital (e.g. Project 25). All channels are shown as if programmed in a portable or mobile radio. Repeaters must be programmed with the Rx and Tx reversed.

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Shared Interoperability Channels

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS 217A					Frequency Band VHF			Description Fire Channels			
	Channel Configuration	Channel Name / Trunked Radio System Talk Group	Eligible Users / Assignments	Rx Freq	N or W	Mobile Rx Tone / NAC	Tx Freq	N or W	Mobile Tx Tone / NAC	Mode A, D, or M	Notes
1		VFIRE21		154.2800	N		154.2800	N			
2		VFIRE22		154.2650	N		154.2650	N			
3		VFIRE23		154.2950	N		154.2950	N			
6											

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COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS 217A						Frequency Band VHF		Description Fire Channels			
	Channel Configuration	Channel Name / Trunked Radio System Talk Group	Eligible Users / Assignments	Rx Freq	N or W	Mobile Rx Tone / NAC	Tx Freq	N or W	Mobile Tx Tone / NAC	Mode A, D, or M	Notes
7											
8											
A=Analog, D=Digital, M=Mixed Mode; N=Narrowband, W=Wideband											

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COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS 217A						Frequency Band VHF		Description EMS Channels			
	Channel Configuration	Channel Name / Trunked Radio System Talk Group	Eligible Users / Assignments	Rx Freq	N or W	Mobile Rx Tone / NAC	Tx Freq	N or W	Mobile Tx Tone / NAC	Mode A, D, or M	Notes
1		VMED (EMS STATEWIDE)		155.2050	N		155.2050	N			
2		VMED28		155.3400	N		155.3400	N			
3											
6											
7											
8											

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COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS 217A					Frequency Band VHF			Description EMS Channels			
	Channel Configuratio n	Channel Name / Trunked Radio System Talk Group	Eligible Users / Assignments	Rx Freq	N or W	Mobile Rx Tone / NAC	Tx Freq	N or W	Mobile Tx Tone / NAC	Mode A, D, or M	Notes
A=Analog, D=Digital, M=Mixed Mode; N=Narrowband, W=Wideband											

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COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS 217A						Frequency Band VHF Low Band		Description Law Enforcement Channels			
	Channel Configuration	Channel Name / Trunked Radio System Talk Group	Eligible Users / Assignments	Rx Freq	N or W	Mobile Rx Tone / NAC	Tx Freq	N or W	Mobile Tx Tone / NAC	Mode A, D, or M	Notes
1		SIRS		39.5400	W		39.5400	W			
2											
3											
6											
7											
A=Analog, D=Digital, M=Mixed Mode; N=Narrowband, W=Wideband											

Commonwealth of Virginia TICFOG

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MUTUAL AID CHANNELS

The convention calls for frequency lists to show four digits after the decimal place, followed by either an “N” or a “W”, depending on whether the frequency is narrow or wide band. Mode refers to either “A” or “D” indicating analog or digital (e.g. Project 25). All channels are shown as if programmed in a portable or mobile radio. Repeaters must be programmed with the Rx and Tx reversed. Unless stated otherwise, all frequencies are MHz except CTCSS tones, which are in Hz.

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VHF High Band Non-Federal National Interoperability Channels

VHF HIGH BAND

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS 217A				Frequency Band VHF HIGH BAND				Description STATEWIDE CHANNEL PLAN			
	Channel Configuration	Channel Name / Trunked Radio System Talk Group	Eligible Users / Assignments	Mobile Rx Freq	N or W	Rx Tone / NAC	Mobile Tx Freq	N or W	Tx Tone / NAC	Mod e A, D, or M	Notes
1	Simplex Base / Mobile	VCALL10	Any Public Safety	155.7525	N	CSQ	Simplex	N	156.7 (5A) ±	A ±	
2	Simplex Base / Mobile	VTAC11 *	Any Public Safety	151.1375	N	CSQ	Simplex	N	156.7 (5A) ±	A ±	
3	Simplex Base / Mobile	VTAC12 *	Any Public Safety	154.4525	N	CSQ	Simplex	N	156.7 (5A) ±	A ±	
4	Simplex Base / Mobile	VTAC13	Any Public Safety	158.7375	N	CSQ	Simplex	N	156.7 (5A) ±	A ±	

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COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS 217A				Frequency Band VHF HIGH BAND			Description STATEWIDE CHANNEL PLAN				
	Channel Configuration	Channel Name / Trunked Radio System Talk Group	Eligible Users / Assignments	Mobile Rx Freq	N or W	Rx Tone / NAC	Mobile Tx Freq	N or W	Tx Tone / NAC	Mod e A, D, or M	Notes
5	Simplex Base / Mobile	VTAC14	Any Public Safety	159.4725	N	CSQ	Simplex	N	156.7 (5A) ±	A ±	
6	Tactical Rptr	VTAC33 *•	Any Public Safety	159.4725	N	CSQ	151.1375	N	136.5 (4Z)	A ±	
7	Tactical Rptr	VTAC34 *•	Any Public Safety	158.7375	N	CSQ	154.4525	N	136.5 (4Z)	A ±	
8	Tactical Rptr	VTAC35 •	Any Public Safety	159.4725	N	CSQ	158.7375	N	136.5 (4Z)	A ±	
9	Tactical Rptr	VTAC36 *•	Any Public Safety	151.1375	N	CSQ	159.4725	N	136.5 (4Z)	A ±	
10	Tactical Rptr	VTAC37 *•	Any Public Safety	154.4525	N	CSQ	158.7375	N	136.5 (4Z)	A ±	
11	Tactical Rptr	VTAC38 •	Any Public	158.7375	N	CSQ	159.4725	N	136.5 (4Z)	A ±	

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COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS 217A				Frequency Band VHF HIGH BAND			Description STATEWIDE CHANNEL PLAN			
Channel Configuratio n	Channel Name / Trunked Radio System Talk Group	Eligible Users / Assignments	Mobile Rx Freq	N or W	Rx Tone / NAC	Mobile Tx Freq	N or W	Tx Tone / NAC	Mod e A, D, or M	Notes
		Safety								
<p>* VTAC11-12, VTAC33-34, and VTAC36-37 may not be used in Puerto Rico or the USVI.</p> <p>± Default operation should be carrier squelch receive, CTCSS transmit. If the user can enable/disable without reprogramming the radio, the indicated CTCSS tone also could be programmed for receive, and the user instructed how and when to enable/disable.</p> <ul style="list-style-type: none"> • VTAC33-38 recommended for deployable tactical repeater use only (FCC Station Class FB2T). • VTAC36-38 are preferred; VTAC33-35 should be used only when necessary due to interference. <p>All channels on this page are NARROWBAND only</p>										

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UHF Non-Federal National Interoperability Channels

UHF

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS 217A				Frequency Band UHF				Description STATEWIDE CHANNEL PLAN			
	Channel Configuratio n	Channel Name / Trunked Radio System Talk Group	Eligible Users / Assignments	Rx Freq	N or W	Rx Tone / NAC	Tx Freq	N or W	Tx Tone / NAC	Mod e A, D, or M	Notes
1	Repeater Pair	UCALL40	Any Public Safety	453.2125	N	CSQ	458.2125	N	156.7	A	
2	Simplex Base / Mobile	UCALL40D	Any Public Safety	453.2125	N	CSQ	Simplex	N	156.7	A	
3	Repeater Pair	UTAC41	Any Public Safety	453.4625	N	CSQ	458.4625	N	156.7	A	

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COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS 217A				Frequency Band UHF				Description STATEWIDE CHANNEL PLAN			
	Channel Configuration	Channel Name / Trunked Radio System Talk Group	Eligible Users / Assignments	Rx Freq	N or W	Rx Tone / NAC	Tx Freq	N or W	Tx Tone / NAC	Mode A, D, or M	Notes
4	Simplex Base / Mobile	UTAC41D	Any Public Safety	453.4625	N	CSQ	Simplex	N	156.7	A	
5	Repeater Pair	UTAC42	Any Public Safety	453.7125	N	CSQ	458.7125	N	156.7	A	
6	Simplex Base / Mobile	UTAC42D	Any Public Safety	453.7125	N	CSQ	Simplex	N	156.7	A	
7	Repeater Pair	UTAC43	Any Public Safety	453.8625	N	CSQ	458.8625	N	156.7	A	

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COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS 217A				Frequency Band UHF				Description STATEWIDE CHANNEL PLAN			
	Channel Configuration	Channel Name / Trunked Radio System Talk Group	Eligible Users / Assignments	Rx Freq	N or W	Rx Tone / NAC	Tx Freq	N or W	Tx Tone / NAC	Mod e A, D, or M	Notes
8	Simplex Base / Mobile	UTAC43D	Any Public Safety	453.8625	N	CSQ	Simplex	N	156.7	A	
Default operation should be carrier squelch receive, CTCSS transmit. If the user can enable/disable without reprogramming the radio, the indicated CTCSS tone also could be programmed for receive, and the user instructed how and when to enable/disable.											

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800 MHz NPSPAC Interoperability Channels / After Rebanding

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS 217A				Frequency Band 800 MHZ			Description STATEWIDE CHANNEL PLAN				
	Channel Configuration	Channel Name / Trunked Radio System Talk Group	Eligible Users / Assignments	Rx Freq	N or W	Rx Tone / NAC	Tx Freq	N or W	Tx Tone / NAC	Mod e A, D, or M	Notes
1	Repeater Pair	8CALL90	Any Public Safety	851.0125	W	156.7	806.0125	W	156.7	A	
2	Simplex Base / Mobile	8CALL90D	Any Public Safety	851.0125	W	156.7	851.0125	W	156.7	A	
3	Repeater Pair	8TAC91	Any Public Safety	851.5125	W	156.7	806.5125	W	156.7	A	
4	Simplex Base / Mobile	8TAC91D	Any Public Safety	851.5125	W	156.7	851.5125	W	156.7	A	

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COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS 217A				Frequency Band 800 MHZ			Description STATEWIDE CHANNEL PLAN				
	Channel Configuration	Channel Name / Trunked Radio System Talk Group	Eligible Users / Assignments	Rx Freq	N or W	Rx Tone / NAC	Tx Freq	N or W	Tx Tone / NAC	Mode A, D, or M	Notes
5	Repeater Pair	8TAC92	Any Public Safety	852.0125	W	156.7	807.0125	W	156.7	A	
6	Simplex Base / Mobile	8TAC92D	Any Public Safety	852.0125	W	156.7	852.0125	W	156.7	A	
7	Simplex Base / Mobile	8TAC93	Any Public Safety	852.5125	W	156.7	807.5125	W	156.7	A	
8	Simplex Base / Mobile	8TAC93D	Any Public Safety	852.5125	W	156.7	852.5125	W	156.7	A	
9	Simplex Base / Mobile	8TAC94	Any Public Safety	853.0125	W	156.7	808.0125	W	156.7	A	

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COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS 217A				Frequency Band 800 MHZ			Description STATEWIDE CHANNEL PLAN				
	Channel Configuration	Channel Name / Trunked Radio System Talk Group	Eligible Users / Assignments	Rx Freq	N or W	Rx Tone / NAC	Tx Freq	N or W	Tx Tone / NAC	Mode A, D, or M	Notes
10	Simplex Base / Mobile	8TAC94D	Any Public Safety	853.0125	W	156.7	853.0125	W	156.7	A	
Default operation should be carrier squelch receive, CTCSS transmit. If the user can enable/disable without reprogramming the radio, the indicated CTCSS tone also could be programmed for receive, and the user instructed how and when to enable/disable.											

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800 MHz NPSPAC Interoperability Channels

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS 217A				Frequency Band 800 MHZ			Description STATEWIDE CHANNEL PLAN				
	Channel Configuration	Channel Name / Trunked Radio System Talk Group	Eligible Users / Assignments	Rx Freq	N or W	Rx Tone / NAC	Tx Freq	N or W	Tx Tone / NAC	Mode A, D, or M	Notes
1	Repeater Pair	ICALL	Any Public Safety	866.0125	W	156.7	821.0125	W	156.7	A	
2	Simplex Base / Mobile	ICALLD	Any Public Safety	866.0125	W	156.7	Simplex	W	156.7	A	
3	Repeater Pair	ITAC1	Any Public Safety	866.5125	W	156.7	821.5125	W	156.7	A	
4	Simplex Base / Mobile	ITAC1D	Any Public Safety	866.5125	W	156.7	Simplex	W	156.7	A	

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COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS 217A					Frequency Band 800 MHZ			Description STATEWIDE CHANNEL PLAN			
	Channel Configuration	Channel Name / Trunked Radio System Talk Group	Eligible Users / Assignments	Rx Freq	N or W	Rx Tone / NAC	Tx Freq	N or W	Tx Tone / NAC	Mode A, D, or M	Notes
5	Repeater Pair	ITAC2	Any Public Safety	867.0125	W	156.7	822.0125	W	156.7	A	
6	Simplex Base / Mobile	ITAC2D	Any Public Safety	867.0125	W	156.7	Simplex	W	156.7	A	
7	Repeater Pair	ITAC3	Any Public Safety	867.5125	W	156.7	822.5125	W	156.7	A	
8	Simplex Base / Mobile	ITAC3D	Any Public Safety	867.5125	W	156.7	Simplex	W	156.7	A	
9	Repeater Pair	ITAC4	Any Public Safety	868.0125	W	156.7	823.0125	W	156.7	A	

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COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS 217A					Frequency Band 800 MHZ			Description STATEWIDE CHANNEL PLAN			
	Channel Configuration	Channel Name / Trunked Radio System Talk Group	Eligible Users / Assignments	Rx Freq	N or W	Rx Tone / NAC	Tx Freq	N or W	Tx Tone / NAC	Mod e A, D, or M	Notes
10	Simplex Base / Mobile	ITAC4D	Any Public Safety	868.0125	W	156.7	Simplex	W	156.7	A	
Default operation should be carrier squelch receive, CTCSS transmit. If the user can enable/disable without reprogramming the radio, the indicated CTCSS tone also could be programmed for receive, and the user instructed how and when to enable/disable.											

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700 MHz Interoperability Channels (Proposed)

700 MHz Interoperability Channels (Proposed)			
FCC Channel (Subscriber Load)		Primary Use	NPSTC ID
Receive Ch.	Transmit Ch.		
23-24	983-984	General Public	7TAC51
	23-24	Safety	7TAC51D
39-40	999-1000	Calling Channel	7CALL50
	39-40		7CALL50D
63-64	1023-1024	EMS	7MED65
	63-64		7MED65D
79-80	1039-1040	EMS	7MED66
	79-80		7MED66D
103-104	1063-1064	General Public	7TAC2
	103-104	Safety	7TAC52D
119-120	1079-1080	General Public	7TAC55
	119-120	Safety	7TAC55D
143-144	1103-1104	Fire	7FIRE63
	143-144		7FIRE63D
159-160	1119-1120	Fire	7FIRE64
	159-160		7FIRE64D
183-184	1143-1144	General Public	7TAC53
	183-184	Safety	7TAC53D
199-200	1159-1160	General Public	7TAC56
	199-200	Safety	7TAC56D
223-224	1183-1184	Law Enforcement	7LAW61
	223-224		7LAW61D
239-240	119-1200	Law Enforcement	7LAW62
	239-240		7LAW62D
263-264	1223-1224	General Public	7TAC54
	263-264	Safety	7TAC54D
279-280	1239-1240	Mobile Data	7DATA69
	279-280		7DATA69D
303-304	1263-1264	Mobile Repeater	7MOB59
	303-304		7MOB59D
319-320	1279-1280	Other Public	7GTAC57

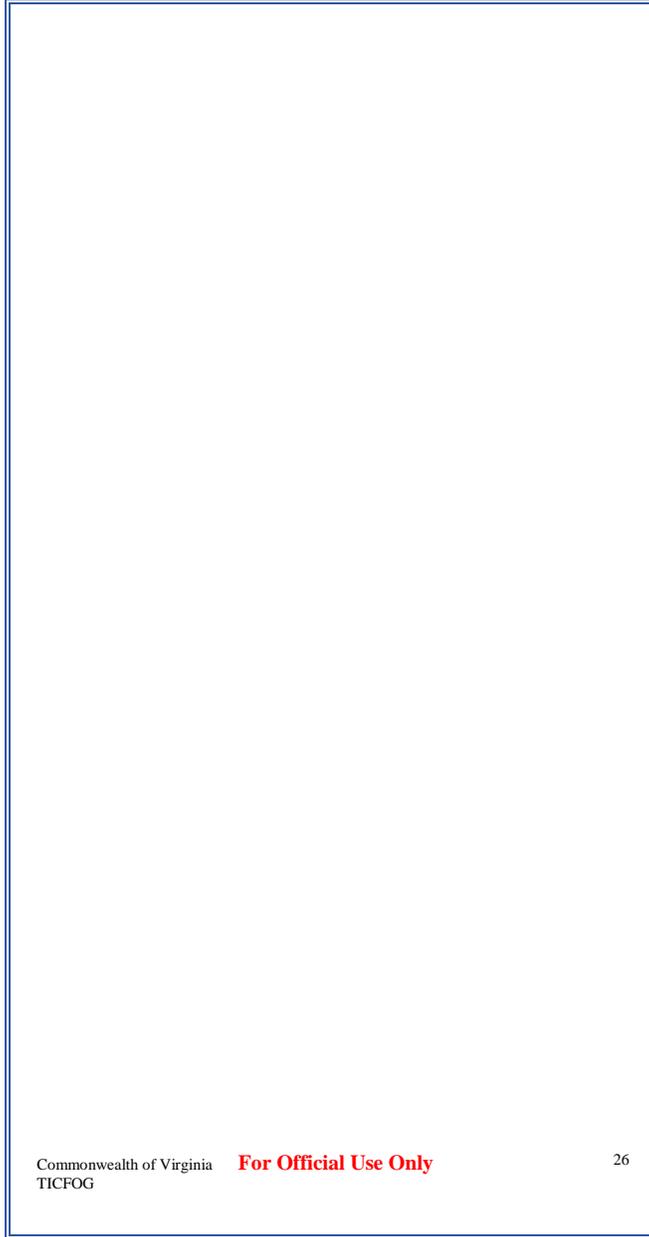
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700 MHz Interoperability Channels (Proposed)			
FCC Channel (Subscriber Load)		Primary Use	NPSTC ID
Receive Ch.	Transmit Ch.		
	319-320	Service	7GTAC57D

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700 MHz Interoperability Channels (Proposed)			
FCC Channel (Subscriber Load)		Primary Use	NPSTC ID
Receive Ch.	Transmit Ch.		
641-642	1601-1602	EMS	7MED86
	641-642		7MED86D
657-658	1617-1618	General Public Safety	7TAC71
	657-658		7TAC71D
681-682	1641-1642	Calling Channel	7CALL70
	681-682		7CALL70D
697-698	1657-1658	EMS	7MED87
	697-698		7MED87D
721-722	1681-1682	Fire	7FIRE83
	721-722		7FIRE83D
737-738	1697-1698	General Public Safety	7TAC72
	737-738		7TAC72D
761-762	1721-1722	General Public Safety	7TAC75
	761-762		7TAC75D
777-778	1737-1738	Fire	7FIRE84
	777-778		7FIRE84D
801-802	1761-1762	Law Enforcement	7LAW81
	801-802		7LAW81D
817-818	1777-1778	General Public Safety	7TAC73
	817-818		7TAC73D
841-842	1801-1802	General Public Safety	7TAC76
	841-842		7TAC76D
857-858	1817-1818	Law Enforcement	7LAW82
	857-858		7LAW82D
881-882	1841-1842	Mobile Repeater	7MOB79
	881-882		7MOB79D
897-898	1857-1858	General Public Safety	7TAC74
	897-898		7TAC74D
921-922	1881-1882	Mobile Data	7DATA89
	921-922		7DATA89D
937-938	1897-1898	Other Public Service	7GTAC77
	937-938		7GTAC77D

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GATEWAYS

Gateway Name	Owning/Managing POC Information			Day-to-Day or Incident / Event	Make / Model	Fixed / Mobile	No. of Simultaneous Nets	No. of Ports
	Agency	Title	Phone					
STATE ASSETS								
Commlinc	VSP	Cpt Mike Bolton	804-674-2000	Day-to-Day	SyTech RIOS	Fixed		
VDEM MCP	VDEM	Mike Keefe-Thomas	804-674-2400	Incident	ACU 1000	Mobile		
VDEM TSU	VDEM	Mike Keefe-Thomas	804-674-2400	Incident	ACU 1000	Mobile		
VDEM F-450	VDEM	Mike Keefe-Thomas	804-674-2400	Incident	ACU T	Mobile		
VEOC	VDEM	Mike Keefe-Thomas	804-674-2400	Incident	SyTech RIOS	Fixed		

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Note: Contact the Strategic Reserve Manager 804-674-2400 for information.

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CACHE RADIOS

Radio Cache Name	Make / Model	Owning/Managing POC Information			Frequency Band	Qty
		Agency	Title	Phone		
STATE ASSETS						
Chesapeake	Various	VDEM	Strategic Reserve Manager	804-674-2400	VHF-Hi, UHF, 700/800 MHz	300
Fairfax	Various	VDEM	Strategic Reserve Manager	804-674-2400	VHF Hi, UHF, 700/800 MHz	300
Harrisonburg	Various	VDEM	Strategic Reserve Manager	804-674-2400	VHF-Hi, UHF, 700/800 MHz	300
Lunenburg	Various	VDEM	Strategic Reserve Manager	804-674-2400	VHF-Hi, UHF, 700/800 MHz	200
Montgomery	Various	VDEM	Strategic Reserve Manager	804-674-2400	VHF-Hi, UHF, 700/800 MHz	200

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Note: Contact the Strategic Reserve Manager 804-674-2400 for information.

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MOBILE COMMAND UNITS

Unit ID/ Designator	Resource Type	Owning / Managing POC Information			Deployment Area
		Agency	Title	Phone	
STATE ASSETS					
VDEM MCP / VDEM EM-1	NIMS Type 1	VDEM	Strategic Reserve Manager	804-674-2400	Statewide
VDEM TSU/ VDEM 380	NIMS Type 2	VDEM	Strategic Reserve Manager	804-674-2400	Statewide
VDEM Southwest MCP/VDEM 390	NIMS Type 3	VDEM	Strategic Reserve Manager	804-674-2400	Statewide
VDEM F-450/VDEM EM90	NIMS Type 3	VDEM	Strategic Reserve Manager	804-674-2400	Statewide

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Regional Interoperability Information

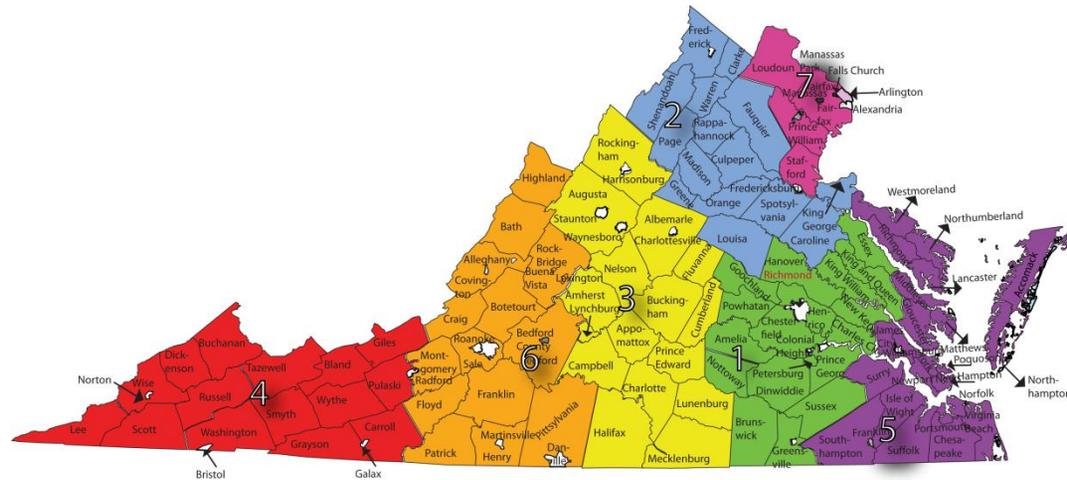


Figure 0-1 Regions of the Commonwealth of Virginia

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Regional Information

This FOG is intended to apply to the Commonwealth of Virginia as shown above. Specifically, this is a field operations guide intended to be used by public safety personnel during day-to-day and emergency response situations. Public safety personnel are located in jurisdictions geographically identified in the map above. More detailed information on each region is listed in the following sections.

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Region 1 Interoperability Information	
Amelia County	
<i>PSAP</i> 16441 Court St. Amelia Va. 23002 (804) 561-2118	
Police/Sheriff	VHF High Band and SIRS
Fire	VHF High Band
EMS	VHF High Band
Admin	VHF High Band
Admin (Schools)	UHF
Brunswick County	
<i>PSAP</i> 120 E. Hicks St. Lawrenceville Va. 23868 (434) 848-6000	
Police/Sheriff	VHF High Band and SIRS
Fire	VHF High Band and UHF
EMS	VHF High Band
Admin	VHF High Band
Charles City County	
<i>PSAP</i> 10780 Courthouse Rd. Charles City, Va. 23030 (804) 829-9265	
Police/Sheriff	VHF High Band and SIRS
Fire	VHF High Band
EMS	VHF High Band
Admin (Public Works)	VHF High Band
Admin (Education)	VHF High Band

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Region 1 Interoperability Information	
<i>Chesterfield County</i>	
<i>PSAP</i> 6610 Public Safety Way Chesterfield Va. 23832 (804) 748-1251	
Police	800 MHz, VHF High Band and SIRS
Fire	800 MHz and VHF Low Band
EMS	800 MHz and VHF High Band
Admin (Airport)	VHF High Band
Admin (Schools)	UHF and VHF High Band
Admin (Parks and Rec)	UHF
Admin (Tech Ctr)	VHF High Band
Admin (Community High School)	UHF
Admin (Health Ctr)	UHF
Admin (Dept of Utilities)	UHF
<i>Dinwiddie County</i>	
<i>PSAP</i> 13910 Courthouse Rd. Dinwiddie Va. 23841 (804) 469-3755	
Police	VHF High Band and SIRS
Fire	VHF High Band
EMS	VHF High Band
Admin (Water Authority)	UHF
Admin (School Board)	VHF High Band
Admin (Schools)	VHF High Band and VHF Low Band
<p style="display: flex; justify-content: space-between; margin-top: 20px;"> Commonwealth of Virginia TICFOG For Official Use Only 5 </p>	

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Region 1 Interoperability Information	
Essex County	
PSAP 304 Prince St. Tappahannock Va. 22560 (804) 443-3346	
Police	VHF High Band and SIRS
Fire	VHF High Band
EMS	VHF High Band and UHF MED Channels
Admin (Schools)	UHF
Goochland County	
PSAP 2938 River Rd West Goochland Va. 23063 (804) 556-5348	
Police	VHF High Band / SIRS / 800 MHz
Fire	VHF High Band
EMS	VHF High Band
Admin (SCADA)	VHF High Band
Admin (Public Bldgs)	VHF High Band
Admin (Schools)	VHF High Band
Greensville County	
PSAP 174 Uriah Branch Way Emporia Va. 23847 (434) 348-4200	
Police	VHF High Band SIRS and UHF
Fire	VHF High Band
EMS	VHF High Band
Admin (Public Works)	VHF Low Band
Admin (Schools)	UHF
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Region 1 Interoperability Information	
Hanover County	
<i>PSAP</i> 7522 County Complex Rd. Hanover Va. 23069 (804) 365-6140	
Police	800 MHz and SIRS
Fire	800 MHz and VHF High Band
EMS	800 MHz and VHF High Band
Admin	800 MHz and VHF High Band
Admin (Jail)	UHF
Admin (Pamunkey Jail)	UHF
Henrico County	
<i>PSAP</i> 7701 E. Parham Rd. Richmond Va. 23228 (804) 501-5000	
Police	800 MHz and UHF
Fire	800 MHz
EMS	800 MHz, UHF and VHF High Band
Admin	800 MHz, VHF High Band
Admin (Waste Water)	UHF
Admin (Schools)	800 MHz, UHF and VHF High Band
Admin (Regional Jail)	UHF
Admin (Belmont Golf Club)	UHF
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Region 1 Interoperability Information	
King and Queen County	
<i>PSAP</i> 242 Allen Circle, Suite A King & Queen C.H. Va. 23085 (804) 785-7400	
Police	VHF High Band and SIRS
Fire	VHF High Band
EMS	VHF High Band
Public Works	UHF
King William County	
<i>PSAP</i> 351 Courthouse Ln King William Va. 23086 (804) 769-0999	
Police	VHF High Band and SIRS
Fire	VHF High Band
EMS	VHF High Band
Admin (Public Works)	UHF
New Kent County	
<i>PSAP</i> 12001 Courthouse Cir. New Kent Va. 23124 (434) 966-9500	
Police	VHF High Band and SIRS
Fire	VHF High Band
EMS	VHF High Band
Admin (School)	VHF Low Band
Admin (School)	UHF

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Region 1 Interoperability Information	
Prince George County	
PSAP 6520 Laurel Spring Rd. Prince George Va. 23875 (804) 733-2770	
Police	UHF, VHF High Band and SIRS
Fire	UHF
EMS	UHF
Admin (School)	UHF
Admin (Countywide)	UHF
Sussex County	
PSAP 20212 Thorton Square Sussex Va. 23884 (434) 246-5000	
Police	VHF High Band and SIRS
Fire	VHF High Band
EMS	VHF High Band
Admin (School)	VHF High Band
City of Colonial Heights	
PSAP 100 A Highland Ave. Colonial Heights Va. 23834 (804) 520-9300	
Police	800 MHz, UHF and SIRS
Fire	800 MHz, VHF High Band
EMS	800 MHz and VHF High Band
Admin (High School)	UHF
Admin	VHF High Band
Admin (Coordination)	UHF and VHF High Band
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Region 1 Interoperability Information	
City of Petersburg	
<i>PSAP</i> 37 E. Tabb St. Petersburg Va. 23804 (804) 732-4222	
Police	800 MHz ,UHF & SIRS
Sheriff	VHF Low Band
Fire	800 MHz
EMS	800 MHz
Admin	VHF High Band
Admin (Transportation)	UHF
Admin	UHF, VHF Low Band and VHF High Band
Admin (School Board)	UHF
Admin (Golf Course)	UHF
Admin (Area Transit)	UHF
Admin (Schools)	VHF High Band
City of Richmond	
<i>PSAP</i> 3516 N. Hopkins Rd Richmond Va. 23224 (804) 646-5100	
Police	800 MHz
Fire	800 MHz
EMS	800 MHz, UHF and VHF High Band
Admin	800 MHz, UHF and VHF High Band

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Region 2 Interoperability Information	
Caroline County	
<i>PSAP</i> <i>108 B Courthouse Ln</i> <i>Bowling Green Va. 22427</i> <i>(804) 633-4357</i>	
Police	800 MHz
Police	VHF High Band SIRS
Fire	VHF High Band
EMS	VHF High Band and UHF (HEAR and MED Channels)
Admin	VHF High Band (SCADA system and inspections dept)
Clarke County	
<i>PSAP</i> <i>100 N. Church St.</i> <i>Berryville Va. 22611</i> <i>(540) 955-1234</i>	
Police	VHF High Band and SIRS
Fire	VHF High Band and VHF Low Band
EMS	VHF Low Band
Admin	VHF Low Band
Admin (School)	UHF

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Region 2 Interoperability Information	
<i>Culpeper County</i>	
<i>PSAP 15166 Richmond Rd. Culpeper Va. 22701 (540) 727-7900</i>	
Police	800 MHz and SIRS
Fire	800 MHz and VHF Low Band
EMS	800 MHz
Admin (Public Works)	VHF Low Band
Admin (Middle School)	UHF
Admin (School Board)	VHF High Band
<i>Fauquier County</i>	
<i>Warrenton-Fauquier Joint PSAP 78 W. Lee St., Suite 102 Warrenton Va. 20186 (540) 347-6843</i>	
Police	800 MHz and VHF High Band
Fire	800 MHz, UHF and VHF Low Band
EMS	800 MHz and VHF Low Band
Admin	VHF Low Band

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Region 2 Interoperability Information	
<i>Frederick County</i>	
<i>PSAP</i> 5 N. Kent St. Winchester Va. 22601 (540) 665-5645	
Police	VHF High Band
Fire	VHF High Band
EMS	VHF High Band
Admin (Regional Jail)	UHF and SIRS
Admin (Schools)	800 MHz
<i>Greene County</i>	
<i>PSAP</i> 10005 Spotswood Trail Stanardville Va. 22973 (434) 985-2222	
Police	VHF High Band and SIRS
Fire	VHF High Band
EMS	VHF High Band and UHF
Admin (Schools)	UHF
<i>King George County</i>	
<i>PSAP</i> 9483 Kings Highway, Suite 5 King George Va. 22485 (540) 775-2049	
Police	VHF High Band and SIRS
Fire	VHF High Band
EMS	VHF High Band
Admin (Elementary School)	UHF
Admin (Middle School)	UHF
Admin (High School)	UHF
Admin (Schools)	VHF High Band

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Region 2 Interoperability Information	
<i>Louisa County</i>	
<i>PSAP 1 Woolfolk Ave. Louisa Va. 23093 (540) 967-1234</i>	
Police	VHF High Band and SIRS
Fire	VHF High Band
EMS	VHF High Band and UHF
Admin (Gold Channel)	VHF High Band
Admin (School)	VHF High Band
<i>Madison County</i>	
<i>PSAP 115 Church St. Madison Va. 22727 (540) 948-5161</i>	
Police	VHF High Band and SIRS
Fire	VHF High Band
EMS	VHF High Band
Admin (Schools)	800 MHz and UHF
<i>Orange County</i>	
<i>PSAP 112 W. Main St. Orange Va. 22960 (540) 672-1234</i>	
Police	VHF High Band, UHF and SIRS
Fire	VHF High Band
EMS	VHF High Band
Admin (Regional Jail)	UHF and SIRS
Admin	UHF and VHF High Band
Admin (Maintenance)	UHF

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Region 2 Interoperability Information	
Admin (Landfill)	UHF
Admin (Schools)	VHF High Band
<i>Page County</i>	
<i>PSAP 120 S. Court St. Luray Va. 22835 (540) 843-0911</i>	
Police	UHF, VHF Low Band
Fire	UHF
EMS	UHF
Admin (School Board)	VHF Low Band
Admin	VHF Low Band
<i>Rappahannock County</i>	
<i>PSAP 311-H Gay St. Washington Va. 22747 (540) 675-5300</i>	
Police	800 MHz, VHF Low Band , UHF and SIRS
Fire	800 MHz and VHF Low Band
EMS	800 MHz and VHF Low Band
Admin (Regional Jail)	UHF and VHF Low Band
<i>Shenandoah County</i>	
<i>PSAP 600 N. Main St., Suite 109 Woodstock Va. 22664 (540) 459-6100</i>	
Police	UHF and SIRS
Fire	UHF and VHF Low Band

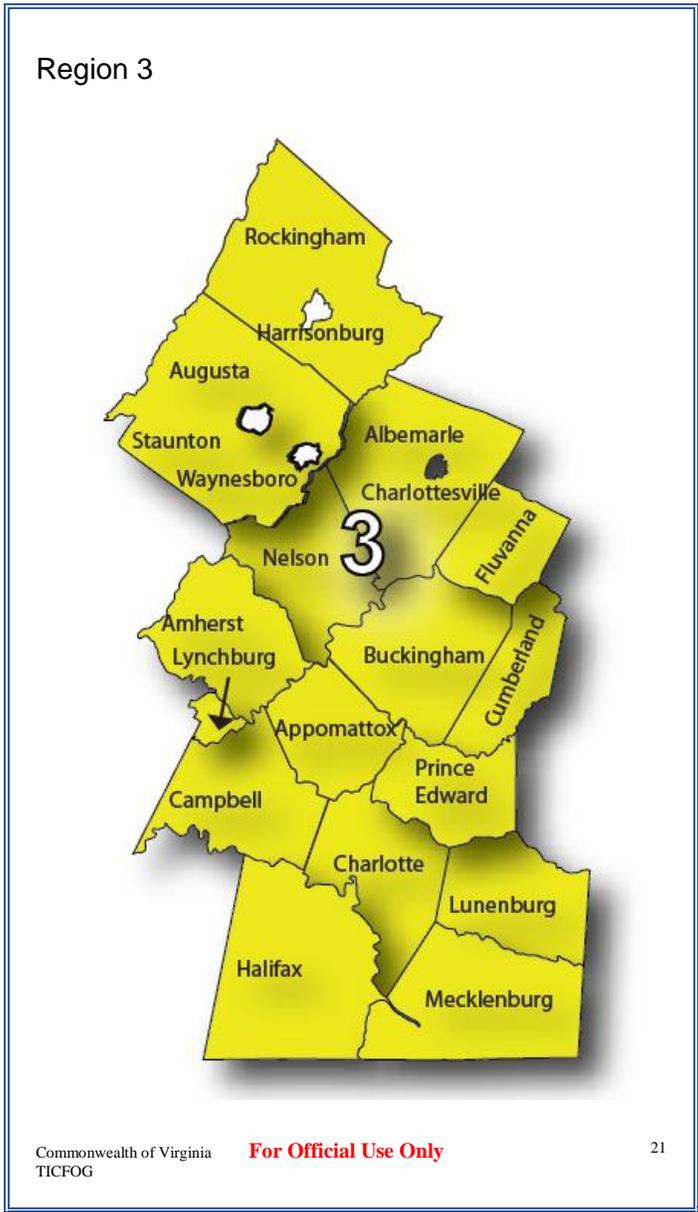
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Region 2 Interoperability Information	
EMS	UHF and VHF Low Band
Admin	VHF Low Band
Admin (Sanitation)	UHF
Admin (Inspections)	UHF
Admin (Schools)	VHF Low Band
<i>Spotsylvania County</i>	
<i>PSAP 9101 Courthouse Rd. Spotsylvania Va. 22553 (540) 582-7115</i>	
Police	800 MHz and VHF High Band
Fire	800 MHz, VHF High Band
EMS	800 MHz
Admin	VHF High Band
Admin (Schools)	UHF
Admin (High School)	UHF
<i>Warren County</i>	
<i>PSAP 23 E. Jackson St. Front Royal Va. 22630 (540) 635-4128</i>	
Police	800 MHz and SIRS
Fire	VHF High Band and VHF Low Band
EMS	VHF High Band and VHF Low Band
Admin (Jail)	UHF
Admin (School Board)	UHF

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Region 2 Interoperability Information	
City of Fredericksburg	
<i>PSAP</i> 615 Princess Anne Dr. Fredericksburg Va. 22404 (540) 372-1048	
Police	VHF High Band and SIRS
Fire	VHF High Band
EMS	VHF High Band
Admin (Water Works)	VHF Low Band
Admin (Public Schools)	UHF
City of Winchester	
<i>PSAP</i> 231 E. Piccadilly St. Winchester Va. 22601 (540) 662-4131	
Police	VHF High Band SIRS
Fire	VHF High Band
EMS	VHF High Band and UHF (Med Channels)
Admin (Multiple agencies)	VHF High Band
Admin	UHF

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Region 3 Interoperability Information

Albemarle County

*PSAP
(Albemarle Co., City of Charlottesville,
University of Virginia)
2306 Ivy Road
Charlottesville Va. 22903
(434) 977-9041*

Police	800 MHz, UHF, VHF High Band and SIRS
Fire	800 MHz
EMS	800 MHz
Admin	VHF High Band
Admin (UVA Medical CTR)	UHF and VHF High Band
Admin (Schools)	UHF

Amherst County

*PSAP
119 Taylor St.
Amherst Va. 24521
(434) 946-9300*

Police	800 MHz, VHF High Band and SIRS
Fire	800 MHz
EMS	800 MHz
Admin (Schools)	UHF

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Region 3 Interoperability Information	
<i>Appomattox County</i>	
<i>PSAP 179 Morton Ln. Appomattox Va. 24522 (434) 352-8241</i>	
Police	UHF and SIRS
Fire	UHF and VHF Low Band
EMS	UHF
Admin (Schools)	VHF High Band
<i>Augusta County</i>	
<i>PSAP 4801 Lee Hwy Verona Va. 24482 (540) 245-5501</i>	
Police	UHF and SIRS
Fire	UHF
EMS	UHF and VHF High Band
Admin	VHF Low Band
Admin (Landfill)	VHF Low Band
<i>Buckingham County</i>	
<i>PSAP 13043 W. James Anderson Highway Buckingham Va. 23921 (434) 969-1772</i>	
Police	VHF High Band, UHF and SIRS
Fire	VHF High Band
EMS	VHF High Band
Admin Public Works)	VHF High Band
Admin (Solid Waste)	UHF
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Region 3 Interoperability Information	
<i>Campbell County</i>	
<i>PSAP 34 Communications Lane Rustburg Va. 24588 (434) 332-9574</i>	
Police	VHF High Band and SIRS
Fire	VHF High Band
EMS	VHF High Band
Admin (Schools)	VHF Low Band
Admin	UHF, VHF Low Band and VHF High Band
Admin (Schools)	UHF and VHF High Band
Admin (School Buses)	UHF
<i>Charlotte County</i>	
<i>PSAP 222 Law Ln. Charlotte CH Va. 23923 (434) 542-5141</i>	
Police	VHF High Band, UHF and SIRS
Fire	VHF High Band
EMS	VHF High Band
Admin (School Buses)	VHF High Band
Admin (School)	VHF High Band
<i>Cumberland County</i>	
<i>PSAP 1 Courthouse Circle Cumberland Va. 23040 (804) 492-4120</i>	
Police	UHF, VHF High Band and SIRS
Fire	UHF
EMS	UHF
Admin	VHF Low Band

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Region 3 Interoperability Information	
Admin (Schools)	VHF High Band
Admin (Public Works)	VHF Low Band
<i>Fluvanna County</i>	
<i>PSAP</i> 718 Thomas Jefferson Parkway Palmyra Va. 22963 (434) 589-8211	
Police	VHF High Band and SIRS
Fire	VHF High Band
EMS	UHF and VHF High Band
Admin (School Buses)	UHF
<i>Halifax County</i>	
<i>PSAP</i> P.O. Box 699 1030 Mary Bethune St. Halifax Va. 24558 (434) 476-3334	
Police	VHF High Band and SIRS
Fire	VHF High Band and VHF Low Band
EMS	VHF High Band
Admin (Schools)	VHF High Band
Admin	VHF Low Band
Admin (High School)	UHF and VHF High Band
Admin (Public Works SB)	VHF High Band
<i>Lunenburg County</i>	
<i>PSAP</i> 453 Courthouse Rd. Lunenburg Va. 23952 (434) 696-4452	
Police	UHF and SIRS
Fire	UHF

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Region 3 Interoperability Information	
EMS	UHF
Admin (Schools)	VHF High Band
Admin	UHF
Mecklenburg County	
PSAP 405 Madison St. Boynton Va. 23917 (434) 738-0028	
Police	UHF and SIRS
Fire	VHF High Band
EMS	VHF High Band
Admin	VHF High Band
Nelson County	
PSAP 94 Courthouse Square Lovington Va. 22949 (434) 263-7050	
Police	VHF High Band
Fire	VHF High Band
EMS	UHF and VHF High Band
Admin	UHF, VHF Low Band and VHF High Band
Prince Edward County	
EMS dispatch coordinated through Town of Farmville Farmville PSAP 814 Longwood Ave. Farmville Va. 23901 (434) 392-3303	
Police	UHF, VHF High Band and SIRS
Fire	VHF High Band and VHF Low Band
EMS	VHF High Band
Admin (Middle School)	VHF High Band

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Region 3 Interoperability Information	
Admin (School Buses)	VHF High Band
Admin	UHF
Admin (Public Works & Bus)	UHF
Rockingham County	
<i>Harrisonburg-Rockingham ECC 101 N. Main St., 5th Floor Harrisonburg Va. 22802 (540) 434-4436 (PSAP)</i>	
Police	800 MHz, UHF and SIRS
Fire	800 MHz and UHF
EMS	800 MHz and UHF
Admin (School Buses)	VHF Low Band
Admin (School Maint)	UHF and VHF Low Band
City of Charlottesville	
<i>Dispatched by Albemarle County PSAP 2306 Ivy Road Charlottesville Va. 22903 (434) 977-9041</i>	
Police	800 MHz, UHF, VHF High Band and SIRS
Fire	800 MHz, UHF and VHF Low Band
EMS	800 MHz
Admin (Transit system)	VHF High Band
Admin	VHF High Band
Admin (High School)	UHF

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Region 3 Interoperability Information

City of Harrisonburg

*Harrisonburg-Rockingham ECC
101 N. Main St., 5th Floor
Harrisonburg Va. 22802
(540) 434-9991 (PSAP)*

Police	800 MHz, UHF and SIRS
Fire	800 MHz and UHF
EMS	800 MHz and UHF
Admin	UHF, VHF Low Band and VHF High Band
Admin (Public Works)	UHF
Admin (Electric Comm)	VHF High Band
Admin (High School)	UHF

City of Lynchburg

PSAP

*3621 Candler Mountain Rd.
Lynchburg Va. 24502
(434) 847-1602*

Police	800 MHz, VHF High Band and SIRS
Fire	800 MHz
EMS	800 MHz and VHF High Band
Admin	VHF High Band
Admin (Transit System)	UHF

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Region 3 Interoperability Information

City of Staunton

PSAP

116 W. Beverley St.

Staunton Va. 22401

(540) 332-3842

Police	UHF and SIRS
Fire	UHF
EMS	UHF
Admin	VHF High Band
Admin (Schools)	VHF High Band

City of Waynesboro

PSAP

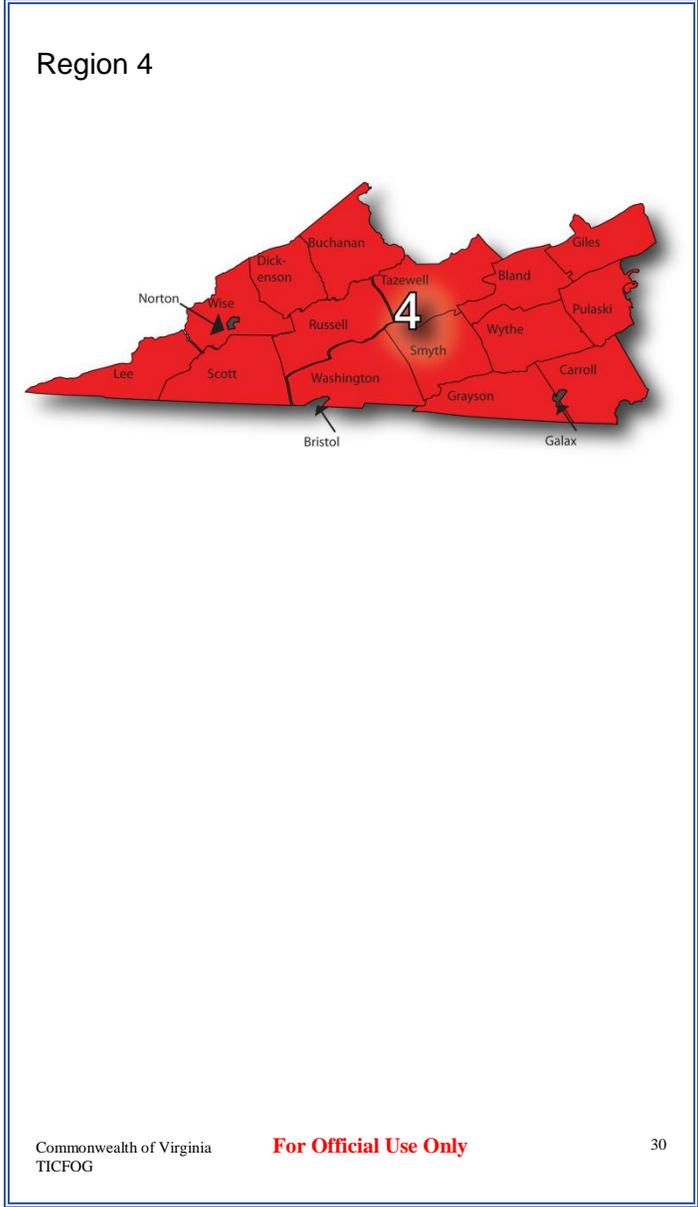
250 S. Wayne Ave.

Waynesboro Va. 22980

(540) 942-6701

Police	UHF and SIRS
Fire	UHF
EMS	UHF

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Region 4 Interoperability Information	
<i>Bland County</i>	
PSAP 612 Main St., Suite 203 Bland Va. 24315 (276) 688-4311	
Police	VHF High Band and SIRS
Fire	VHF High Band
EMS	VHF High Band
Admin (School Trans)	VHF High Band
<i>Buchanan County</i>	
PSAP Walnut St. Grundy Va. 24614 (276) 935-2313	
Police	VHF High Band and SIRS
Fire	VHF High Band
EMS	VHF High Band
Admin (Schools)	VHF High Band
Admin (Waste Dept)	VHF High Band
Admin (Water Utilities)	VHF High Band
<i>Carroll County</i>	
Twin County E 9-1-1 553 North Main St. Galax Va. 24333 (276) 236-8101	
Police	VHF High Band, UHF, VHF Low Band and SIRS
Fire	VHF Low Band
EMS	VHF High Band and UHF
Admin (Schools)	VHF High Band
Admin (High School)	VHF High Band
Admin (Intermediate)	VHF High Band

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Region 4 Interoperability Information	
School)	
<i>Dickenson County</i>	
<i>PSAP</i>	
<i>5444 Dickenson Highway</i>	
<i>Clintwood Va. 24228</i>	
<i>(276) 926-1650</i>	
Police	VHF High Band and SIRS
Fire	VHF High Band
EMS	VHF High Band
Admin (Public Works)	VHF High Band
Admin	VHF High Band
<i>Giles County</i>	
<i>PSAP</i>	
<i>503 Wenonah Ave.</i>	
<i>Pearisburg Va. 24314</i>	
<i>(540) 921-3842</i>	
Police	UHF and SIRS
Fire	UHF and VHF Low Band
EMS	UHF and VHF Low Band
Admin (High School)	VHF Low Band
Admin (School Board)	UHF and VHF Low Band
Admin (Schools)	UHF

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Region 4 Interoperability Information	
Grayson County	
<i>Dispatched by Twin County E 9-1-1 553 North Main St. Galax Va. 24333 (276) 236-8101</i>	
Police	VHF High Band, UHF and VHF Low Band
Fire	VHF High Band and VHF Low Band
EMS	VHF High Band and VHF Low Band
Admin (Schools)	UHF
Lee County	
<i>PSAP Church & Main Jonesville Va. 24263 (276) 346-7777</i>	
Police	VHF Low Band
Fire	VHF High Band, UHF and VHF Low Band
EMS	VHF High Band and UHF
Admin	UHF and VHF Low Band

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Region 4 Interoperability Information	
<i>Pulaski County</i>	
<i>PSAP 52 W. Main St. Pulaski Va. 24301 (540) 980-7800</i>	
Police	UHF, VHF High Band and VHF Low Band
Fire	UHF and VHF Low Band
EMS	UHF and VHF Low Band
Admin (Emergency Svcs)	VHF High Band
Admin (Schools)	UHF
Admin (High School)	UHF
Admin (School Buses)	UHF
Admin (Schools)	UHF
<i>Russell County</i>	
<i>PSAP P O Box 338 Lebanon Va. 24266 (276) 889-8033</i>	
Police	VHF High Band, VHF Low Band and SIRS
Fire	VHF High Band
EMS	VHF High Band and UHF
Admin Emergency Svcs)	VHF High Band
Admin (Schools)	VHF High Band

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Region 4 Interoperability Information	
Scott County	
<i>PSAP</i> 200 Nena St. Gate City Va. 24251 (276) 386-9111	
Police	VHF High Band, UHF and SIRS
Fire	VHF High Band
EMS	VHF High Band
Admin (Public Works)	UHF and VHF Low Band
Admin (School Buses)	UHF
Admin	UHF
Smyth County	
<i>PSAP</i> 109 W. Main St. Marion Va. 24354 (276) 782-4056	
Police	VHF High Band, UHF, VHF Low Band and SIRS
Fire	VHF High Band and VHF Low Band
EMS	VHF High Band
Admin (Water Dept)	VHF High Band
Admin (Schools)	VHF High Band

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Region 4 Interoperability Information	
<i>Tazewell County</i>	
<i>PSAP 145 Blackwell St. Tazewell Va. 24651 (276) 988-0645</i>	
Police	VHF High Band and SIRS
Fire	UHF
EMS	UHF and VHF High Band
Admin	VHF Low Band
Admin (Dept Social Svcs)	UHF
Admin	UHF and VHF Low Band
Admin (Services)	VHF High Band
<i>Washington County</i>	
<i>PSAP 205 Academy Dr. Abingdon Va. 24210 (276) 676-6277</i>	
Police	VHF High Band, VHF Low Band and SIRS
Fire	VHF High Band and VHF Low Band
EMS	VHF High Band
Admin (Water and Sewer)	VHF Low Band
Admin (School Buses)	UHF
Admin (Emergency Services)	VHF High Band
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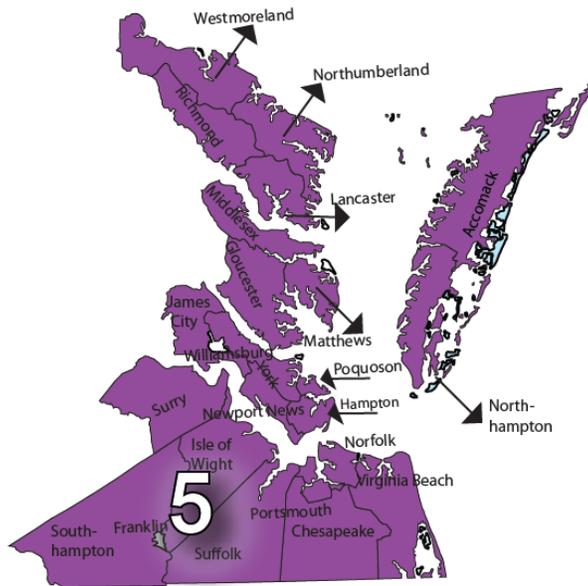
Region 4 Interoperability Information	
Wise County	
PSAP P O Box 916 Wise Va. 24293 (276) 328-3756	
Police	VHF High Band, UHF and SIRS
Fire	VHF High Band and VHF Low Band
EMS	VHF High Band
Admin	800 MHz
Admin (School Board)	UHF
Wythe County	
PSAP 340 S. 6th St. Wytheville Va. 24382 (276) 223-6000	
Police	VHF High Band and SIRS
Fire	VHF High Band, UHF and VHF Low Band
EMS	VHF High Band, UHF and VHF Low Band
Admin (Schools)	UHF and VHF High Band
City of Bristol	
PSAP 415 Cumberland St. Bristol Va. 24201 (276) 645-7400	
Police	VHF High Band and SIRS
Fire	VHF High Band
EMS	UHF and VHF High Band
Admin (Transit System)	UHF

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Region 4 Interoperability Information	
Admin (Public Works)	UHF
City of Galax	
<i>Twin County E 9-1-1 553 North Main St. Galax Va. 24333 (276) 236-8101 (PSAP)</i>	
Police	VHF High Band and SIRS
Fire	VHF High Band and UHF
EMS	
Admin (School Board)	UHF
Admin (Elementary School)	UHF
City of Norton	
<i>PSAP 618 Virginia Ave. Norton Va. 24273 (276) 679-1211</i>	
Police	VHF High Band and SIRS
Fire	VHF High Band and VHF Low Band
EMS	VHF High Band
Admin (Housing Authority)	UHF
Admin (School Maintenance)	VHF High Band

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Region 5



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Region 5 Interoperability Information	
<i>Accomack County</i>	
<i>Eastern Shore of Virginia 9-1-1 23201 Front St. P.O. Box 337 Accomack, VA 23301-0337 (757) 787-0911 (PSAP)</i>	
Police	UHF
Fire	VHF High Band
EMS	VHF High Band and UHF
Admin	VHF High Band
<i>Gloucester County</i>	
<i>PSAP 7502 Justice Dr. Gloucester Va. 23061 (804) 693-3890</i>	
Police	800 MHz, UHF VHF High Band and SIRS
Fire	800 MHz and VHF High Band
EMS	800 MHz and VHF High Band
Admin (Parks and Recreation)	UHF
<i>Isle of Wight County</i>	
<i>PSAP 17110 Monument Circle, Suite C. Isle Of Wight Va. 23397 (757) 357-2151</i>	
Police	VHF High Band and SIRS
Fire	VHF High Band and UHF

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Region 5 Interoperability Information	
EMS	VHF High Band
Admin (School)	VHF High Band
James City County	
PSAP 3131 Forge Rd. Toano Va. 23168 (757) 566-0112	
Police	800 MHz, UHF and VHF Low Band
Fire	800 MHz, VHF High Band
EMS	800 MHz, VHF High Band
Admin (Waste Water)	VHF Low Band
Admin (Courtroom/Jail)	UHF
Admin (Recreation Dept)	VHF High Band
Admin	VHF Low Band
Lancaster County	
PSAP 8311 Mary Ball Rd Lancaster Va. 22503 (804) 462-5111	
Police	VHF High Band and SIRS
Fire	VHF High Band
EMS	VHF High Band
Admin (School)	VHF High Band
Mathews County	
PSAP 10622 Buckley Hall Rd. Mathews Va. 23109 (804) 725-7177	
Police	VHF High Band and

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Region 5 Interoperability Information	
	SIRS
Fire	VHF High Band
EMS	UHF and VHF High Band
Admin (School)	UHF
<i>Middlesex County</i>	
<i>PSAP 75 Oaks Landing Rd. Saluda Va. 23149 (804) 758-2779</i>	
Police	VHF High Band and SIRS
Fire	VHF High Band and VHF Low Band
EMS	VHF High Band and UHF
<i>Northampton County</i>	
<i>Dispatched by Eastern Shore 9-1-1 23201 Front St. Accomac, VA 23301-0337 (757) 787-0911 (PSAP)</i>	
Police	UHF and SIRS
Fire	VHF High Band
EMS	VHF High Band and UHF
Admin (School Buses)	VHF High Band
<i>Northumberland County</i>	
<i>PSAP 76 Judicial Pl. Heathsville Va. 22473 (804) 580-5221</i>	

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Region 5 Interoperability Information	
Police	VHF High Band
Fire	VHF High Band
EMS	VHF High Band
Admin (School)	VHF Low Band
<i>Richmond County</i>	
PSAP P O Box 1000 Warsaw Va. 22572 (804) 333-3611	
Police	VHF Low Band, SIRS and UHF
Fire	VHF Low Band
EMS	VHF Low Band, VHF High Band and UHF (Med Channels)
<i>Southampton County</i>	
PSAP 22336 Main St. Courtland Va. 23837 (757) 653-2100	
Police	VHF High Band and SIRS
Fire	VHF High Band and VHF Low Band
EMS	VHF High Band and VHF Low Band
Admin	VHF Low Band
Admin (Public Works)	VHF High Band
<i>Surry County</i>	

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Region 5 Interoperability Information	
Admin	VHF High Band
Admin (Utilities Dept)	UHF
Admin (Golf Course)	UHF
City of Chesapeake	
<i>PSAP</i> 304 Albemarle Dr. Chesapeake Va. 23322 (757) 382-6161	
Police	800 MHz and SIRS
Fire	800 MHz and VHF High Band
EMS	800 MHz
Admin	UHF, VHF Low Band and VHF High Band
Admin (Schools)	UHF, VHF High Band
Admin (School Board)	VHF High Band
Admin (City School Dist)	VHF Low Band
City of Franklin	
<i>PSAP</i> 1018 Pretlow St. Franklin Va. 23851 (757) 562-8575	
Police	VHF High Band, UHF and SIRS
Fire	VHF High Band and VHF Low Band
EMS	VHF High Band
Admin (Public Utilities)	VHF High Band

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Region 5 Interoperability Information	
City of Hampton	
PSAP 22 Lincoln St. Hampton Va. (757) 727-6111	
Police/Sheriff	800 MHz
Fire	800 MHz
EMS	800 MHz and UHF
Admin (City Services)	800 MHz
Admin	UHF, VHF Low Band and VHF High Band
Admin (Jail)	UHF
Admin (Univ Police)	UHF
City of Newport News	
PSAP 2400 Washington Ave. Newport News Va. 23607 (757) 247-2500	
Police	800 MHz and SIRS
Fire	800 MHz
EMS	800 MHz and VHF High Band
Admin (City Services)	800 MHz
Admin	UHF and VHF High Band
Admin (Middle School)	UHF
Admin (Water Dept)	UHF and VHF High Band
Admin (Airport Security)	VHF High Band
Admin (Survey Crews)	UHF
Admin (Fire Dept)	UHF
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Region 5 Interoperability Information	
City of Norfolk	
<i>PSAP</i> 3661 E. Virginia Beach Blvd. Norfolk Va. 23502 (757) 441-5610	
Police	800 MHz and SIRS
Fire	800 MHz
EMS	800 MHz
Admin (Services)	800 MHz
Admin	UHF and VHF High Band
Admin (School Board)	VHF High Band
Admin (Botanical Garden)	UHF
Admin (Scope Coliseum)	UHF
Admin (Zoo)	VHF High Band
Admin (Redevelopment)	UHF
Admin (Nauticus)	UHF and VHF High Band
Admin (Norfolk Schools)	VHF High Band
City of Poquoson	
<i>PSAP</i> 774 Poquoson Ave. Poquoson Va. 23662 (757) 868-3501	
Police	800 MHz, UHF
Fire	800 MHz and VHF High Band
EMS	800 MHz
Admin (Public Works)	UHF and VHF Low Band
Admin	UHF

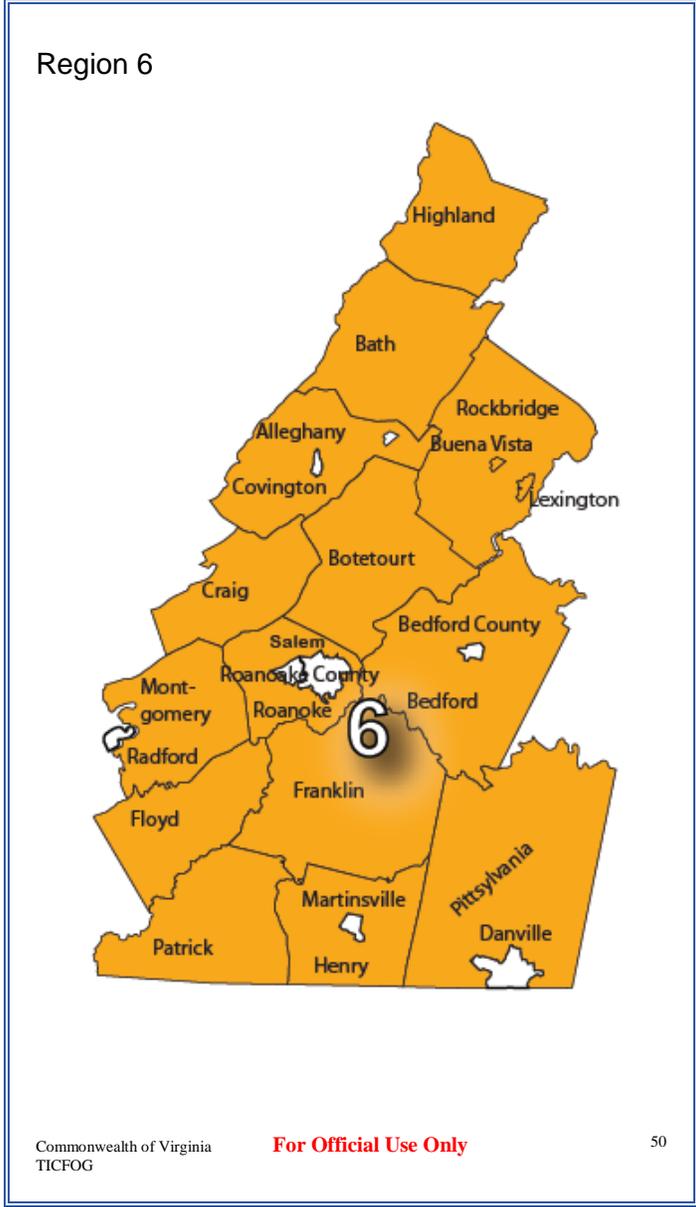
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Region 5 Interoperability Information	
City of Portsmouth	
<i>PSAP</i> 603 Crawford St. Portsmouth Va. 23704 (757) 393-5300	
Police	800 MHz, UHF and SIRS
Fire	800 MHz
EMS	800 MHz, UHF and VHF High Band
Admin (Services)	800 MHz
Admin	VHF Low Band and VHF High Band
Admin (Schools)	UHF
Admin (School Buses)	VHF High Band
City of Suffolk	
<i>PSAP</i> 120 N. Wellons St. Suffolk Va. 23434 (757) 925-2030	
Police	800 MHz and SIRS
Fire	800 MHz
EMS	800 MHz
Admin (Services)	800 MHz
Admin (School Buses)	800 MHz
Admin (Schools)	VHF High Band
Admin	UHF and VHF High Band

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Region 5 Interoperability Information	
<i>City of Virginia Beach</i>	
<i>PSAP</i> 2508 Princess Anne Rd. Va. Beach Va. 23456 (757) 385-5000 ext 4	
Police	800 MHz and SIRS
Fire	800 MHz
EMS	800 MHz
Admin (City Services)	800 MHz
Admin	UHF, VHF Low Band and VHF High Band
Admin (Water Distribution)	UHF
Admin (Golf Course)	UHF
Admin (School Bus Tracking)	UHF
<i>City of Williamsburg</i>	
<i>PSAP</i> 425 Armstead Ave. Williamsburg Va. 23185 (757) 220-2331	
Police	800 MHz
Fire	800 MHz
EMS	800 MHz
Emergency Management	UHF
Admin (Schools)	UHF
Admin (Schools)	VHF High Band
Admin (Redevelopment)	UHF
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Region 6 Interoperability Information	
<i>Alleghany County</i>	
<i>PSAP 9212 Winterberry Ave. Covington Va. 24426 (540) 965-1770</i>	
Police	UHF and SIRS
Fire	800 MHz and VHF Low Band
EMS	800 MHz and VHF Low Band
Admin (Regional Jail)	UHF
<i>Bath County</i>	
<i>PSAP 65 Courthouse Hill Rd. Warm Springs Va. 24484 (540) 839-5300</i>	
Police	UHF, VHF Low Band and SIRS
Fire	UHF and VHF Low Band
EMS	UHF
Admin (The Homestead PD)	UHF
Admin (Schools)	UHF
Admin (Emergency Svcs)	UHF
<i>Bedford County</i>	
<i>PSAP 1345 Falling Creek Rd. Bedford Va. 24523 (540) 586-7827</i>	
Police	800 MHz and UHF
Fire	800 MHz and UHF
EMS	800 MHz and UHF

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Region 6 Interoperability Information	
Admin (Services)	800 MHz
Admin (Schools)	UHF, VHF Low Band and VHF High Band
Botetourt County	
<i>PSAP 1 West Main St., Box 4 Fincastle Va. 24090 (540) 473-8631</i>	
Police	UHF
Fire	UHF and VHF Low Band
EMS	UHF
Admin (Schools)	UHF
Admin (High School)	UHF
Craig County	
<i>PSAP 182 Main St. New Castle Va. 24127 (540) 864-5127</i>	
Police	VHF Low Band and VHF High Band
Fire	VHF Low Band
EMS	VHF Low Band
Admin (Schools)	UHF
Floyd County	
<i>PSAP 123 W. Oxford St. Floyd Va. 24091 (540) 745-9334</i>	
Police	UHF and VHF Low Band
Fire	UHF and VHF Low Band
EMS	UHF and VHF Low Band
Admin	UHF and VHF High Band

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Region 6 Interoperability Information	
Admin (Jail)	VHF Low Band
Admin (Schools)	UHF and VHF High Band
Franklin County	
<i>PSAP 40 E. Court St. Rocky Mount Va. 24151 (540) 483-3000</i>	
Police	VHF High Band and SIRS
Fire	VHF High Band and VHF Low Band
EMS	VHF High Band and VHF Low Band
Admin (Public Works)	VHF High Band
Admin (Schools)	UHF and VHF High Band
Admin	UHF
Admin (SAR)	VHF High Band and VHF Low Band
Admin (Solid Waste)	VHF Low Band
Henry County	
<i>Dispatched by Martinsville-Henry Co. 9-1-1 3300 Kings Mountain Rd. Martinsville Va. 24112 (276) 638-8751</i>	
Police	VHF High Band and SIRS
Fire	VHF High Band
EMS	VHF High Band
Admin	VHF High Band
Admin (Jail)	VHF Low Band
Admin (Parks & Rec)	VHF High Band
Admin (School Buses)	VHF High Band
Admin (Public Works)	UHF

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Region 6 Interoperability Information	
Admin (Public Works)	UHF
Highland County	
<i>PSAP 145 W. Main St. Monterey Va. 24465 (540) 468-2210</i>	
Police	UHF and SIRS
Fire	UHF
EMS	UHF
Admin (Schools)	UHF
Montgomery County	
<i>PSAP 16 S. Franklin St. Christiansburg Va. 24073 (540) 382-6900</i>	
Police	UHF and SIRS
Fire	VHF High Band, UHF and VHF Low Band
EMS	VHF Low Band, UHF and VHF High Band
Admin	VHF Low Band and UHF
Admin (School Buses)	VHF High Band
Admin (Public Service Auth)	VHF High Band
Admin (School Board)	VHF High Band
Admin (Solid Waste)	VHF High Band
Admin (Public Schools)	UHF and VHF High Band
Admin (School Transportation)	UHF and VHF High Band

Region 6 Interoperability Information	
<i>Patrick County</i>	
<i>PSAP 105 Orchard St. Stuart Va. 24171 (276) 694-3161</i>	
Police	UHF, VHF High Band and SIRS
Fire	VHF High Band
EMS	VHF High Band and UHF
Admin (Schools)	VHF High Band
Admin (Emergency Mgt)	VHF Low Band
<i>Pittsylvania County</i>	
<i>PSAP 53 N. Main St. Chatham Va. 24531 (434) 432-7931</i>	
Police	VHF High Band and SIRS
Fire	VHF High Band
EMS	VHF High Band
Admin (School Transportation)	VHF High Band
Admin	VHF High Band and VHF Low Band

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Region 6 Interoperability Information	
<i>Roanoke County</i>	
PSAP 5925 Cove Rd. Roanoke Va. 24019 (540) 561-8036	
Police	800 MHz, VHF High Band and SIRS
Fire	800 MHz
EMS	800 MHz
Admin (Services)	800 MHz
Admin	UHF, VHF Low Band and VHF High Band
Admin (Schools)	UHF
<i>Rockbridge County</i>	
Rockbridge Regional 9-1-1 306 Park Ave. Suite A Buena Vista Va. 24416 (540) 261-6171	
Police	UHF and SIRS
Fire	UHF and VHF Low Band
EMS	UHF
Admin (High School)	VHF Low Band
Admin (Schools)	UHF
<i>City of Bedford</i>	
PSAP 1345 Falling Creek Rd. Bedford Va. 24523 (540) 586-7827	
Police	800 MHz, VHF Low Band and SIRS
Fire	800 MHz
EMS	800 MHz and UHF
Admin (Services)	800 MHz

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Region 6 Interoperability Information	
Admin	UHF
Admin (Emergency Svcs)	UHF
<i>City of Buena Vista</i>	
<i>Dispatched by Rockbridge Regional 9-1-1 306 Park Ave. Suite A Buena Vista Va. 24416 (540) 261-6171</i>	
Police	UHF
Fire	UHF
EMS	UHF
Admin	VHF Low Band
Admin (Water Distribution)	UHF
<i>City of Covington</i>	
<i>PSAP 333 W. Locust St. Covington Va. 24426 (540) 965-6333</i>	
Police	UHF and SIRS
Fire	800 MHz, UHF, VHF High Band and VHF Low Band
EMS	800 MHz, UHF, VHF High Band and VHF Low Band
Admin (Services)	UHF and VHF High Band
Admin	VHF Low Band and VHF High Band

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Region 6 Interoperability Information

City of Danville

*PSAP
427 Patton St.
Danville Va. 24541
(434) 799-5111*

Police	VHF High Band and SIRS
Fire	VHF High Band and UHF
EMS	VHF High Band and UHF
Emergency Ops	VHF High Band
Admin (Public Works)	VHF High Band and UHF
Admin (Schools)	UHF
Admin (Electric Dept)	VHF High Band
Admin	UHF, VHF Low Band and VHF High Band
Admin (Redevelopment)	UHF
Admin (Water & Gas)	VHF High Band

City of Lexington

*Dispatched by
Rockbridge Regional 9-1-1
306 Park Ave. Suite A
Buena Vista Va. 24416
(540) 261-6171*

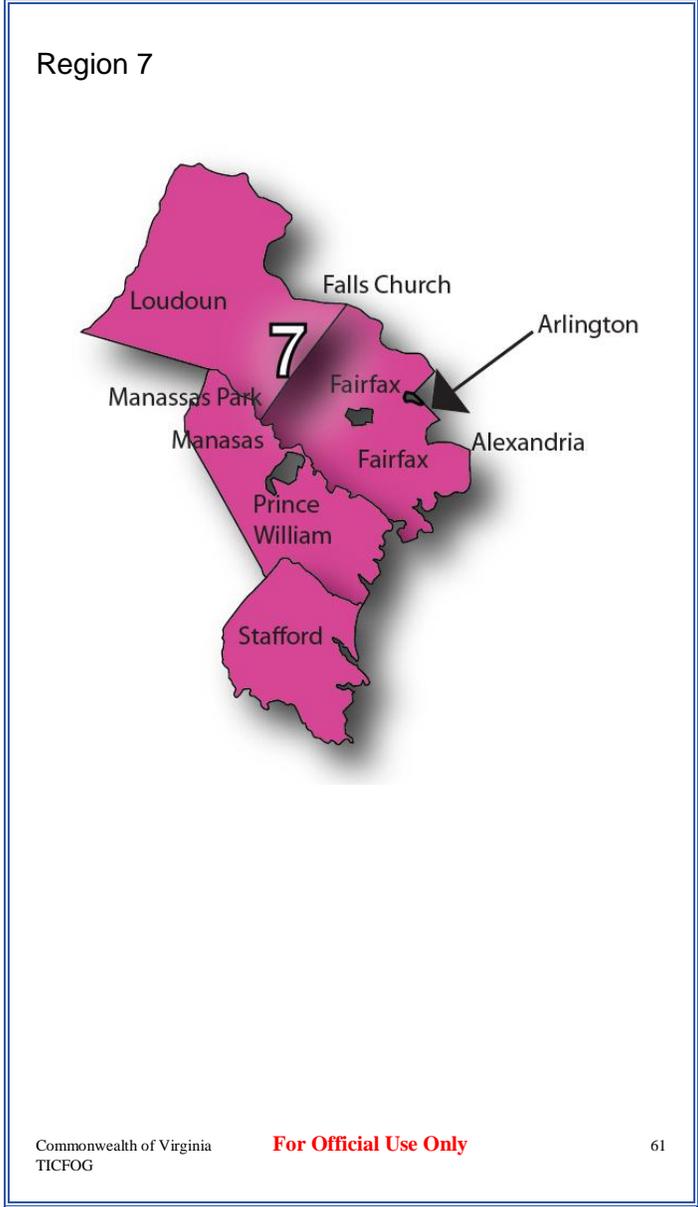
Police	UHF and SIRS
Fire	UHF
EMS	UHF
Admin	VHF Low Band

Region 6 Interoperability Information	
<i>City of Martinsville</i>	
PSAP Martinsville-Henry Co. 9-1-1 3300 Kings Mountain Rd. Martinsville Va. 24112 (276) 638-8751	
Police	VHF High Band and SIRS
Fire	VHF High Band
EMS	VHF High Band
Admin (Senior Services)	VHF High Band
Admin (Electric Dept)	VHF High Band
Admin (Water Resources)	UHF
Admin	VHF High Band
<i>City of Roanoke</i>	
PSAP 215 Church Ave. SW Roanoke Va. 24011 (540) 853-2411	
Police	800 MHz, VHF High Band and SIRS
Fire	800 MHz
EMS	800 MHz
Admin (Services)	800 MHz
Admin	UHF and VHF High Band
Admin (Schools)	VHF High Band
Admin (Schools)	VHF High Band
Admin (Redevelopment)	UHF

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Region 6 Interoperability Information	
City of Radford	
<i>PSAP</i> 601 W. Main St. Radford Va. 24141 (540) 731-3624	
Police	UHF, VHF High Band and SIRS
Fire	UHF
EMS	UHF
Admin	VHF High Band and VHF Low Band
City of Salem	
<i>PSAP</i> 36 E. Calhoun St. Salem Va. 24153 (540) 375-3078	
Police	UHF and SIRS
Fire	UHF
EMS	UHF
Admin (Schools)	UHF
Admin	UHF
Admin (Public Works)	UHF
Admin (Schools)	UHF
Admin (Civic Facilities)	VHF High Band

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Region 7 Interoperability Information	
<i>Arlington County</i>	
<i>PSAP 1400 N. Uhle St., 5th Floor Arlington Va. 22201 (703) 558-2222</i>	
Police	800 MHz and SIRS
Fire	800 MHz
EMS	800 MHz
Admin (Local Govt)	800 MHz
Admin	UHF and VHF High Band
Admin (Schools)	VHF High Band
Admin (Fire Marshall)	UHF
<i>Fairfax County</i>	
<i>PSAP 3911 Woodburn Rd Annandale Va. 22003 (703) 280-0840</i>	
Police	800 MHz, UHF and SIRS
Fire	800 MHz
EMS	800 MHz and UHF
Admin (Services)	800 MHz
Admin (Schools)	VHF High Band
Admin	UHF, VHF Low Band and VHF High Band
Admin (Golf Course)	UHF
Admin (Schools)	UHF
<div style="display: flex; justify-content: space-between; font-size: small;"> Commonwealth of Virginia TICFOG For Official Use Only 62 </div>	

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Region 7 Interoperability Information	
Loudoun County	
PSAP 16600 Courage Ct. Leesburg Va. 20175 (703) 777-2222	
Police	800 MHz, VHF Low Band, VHF High Band, UHF and SIRS
Fire	800 MHz, VHF Low Band
EMS	800 MHz, VHF High Band, VHF Low Band and UHF
Admin (Services)	800 MHz
Admin	UHF, VHF Low Band and VHF High Band
Admin (Schools)	UHF and VHF High Band
Admin (Detention Ctr)	VHF High Band
Admin (County Parks)	UHF
Admin (Water Sanit)	UHF
Admin (Solid Waste)	UHF
Prince William County	
PSAP 3 County Complex Ct Prince William Va. 22192 (703) 792-6500	
Police	800 MHz, VHF Low Band and SIRS
Fire	800 MHz, VHF High Band
EMS	800 MHz, VHF High Band and UHF
Admin (Services)	800 MHz
Admin (Service Auth)	UHF
Admin	UHF, VHF Low Band and VHF High Band
Admin (Detention Ctr)	VHF High Band and SIRS
Admin (Schools)	UHF and VHF Low Band
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Region 7 Interoperability Information	
Admin (County Parks)	UHF
Admin (Potomac MS)	UHF
Admin (Forest Park HS)	UHF
Stafford County	
<i>PSAP</i> 1300 Courthouse Rd. Stafford Va. 22555 (540) 658-4400	
Police	700 MHz, UHF, VHF High Band and SIRS
Fire	700 MHz and UHF
EMS	700 MHz and UHF
Admin (High School)	UHF
Admin	VHF Low Band
Admin (School Buses)	UHF
Admin (Public Works)	UHF
Admin (Utilities)	UHF
Admin (Schools)	UHF
Admin (Emergency Svcs)	VHF High Band
City of Alexandria	
<i>PSAP</i> 900 Second St. Alexandria Va. 22314 (703) 838-4660	
Police/Sheriff	800/700 MHz, VHF Low Band and SIRS
Fire	800/700 MHz and VHF High Band
EMS	800/700 MHz
Admin (Schools)	UHF and 800/700 MHz
Admin (Services)	800/700 MHz
Admin	UHF and VHF High Band
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Region 7 Interoperability Information	
City of Fairfax	
<i>PSAP 4081 University Drive Suite 400 (703) 385-7924</i>	
Police	800 MHz
Fire	800 MHz
EMS	800 MHz
Admin (Services)	800 MHz
Admin	UHF and VHF Low Band
Admin (Public Works)	UHF
Admin (CUE Buses)	UHF
Admin (Crossing Guards)	UHF
City of Falls Church	
<i>PSAP 300 Park Ave. Falls Church Va. 22046 (703) 241-5050</i>	
Police	800 MHz and SIRS
Fire	800 MHz
EMS	800 MHz
Admin (Public Works)	VHF Low Band
Admin	UHF and VHF High Band
Admin (Schools)	VHF High Band

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Region 7 Interoperability Information	
City of Manassas	
<i>PSAP</i> 9518 Fairview Ave. Manassas Va. 22110 (703) 257-8000	
Police	800 MHz and UHF
Fire	800 MHz and VHF High Band
EMS	800 MHz and VHF High Band
Admin (School Board)	UHF
Admin	VHF High Band
Admin (Schools)	800 MHz
City of Manassas Park	
<i>PSAP</i> 329 Manassas Dr. Manassas Park Va. 20111 (703) 361-1136	
Police	800 MHz and UHF
Fire	800 MHz and VHF High Band
EMS	800 MHz
Admin (Schools)	UHF
Admin (School Buses)	UHF
Admin (Public Works)	UHF

Plain Language Words and Phrases

Plain Language	Meaning or Usage
Affirmative	Yes.
At scene	Used when a unit arrives at the scene of an incident.
Available	Used when a unit is ready for a new assignment or can return to quarters.
Available at residence	Used by administrative or staff personnel to indicate they are available and on-call at their residence.
Available at scene	Used when a unit is still committed to an incident, but could be dispatched to a new emergency if needed.
Burning operation	Used to indicate that a fire is started intentionally, usually by the fire department, to eliminate burnable fuels in order to prevent the spread of wildfires.
Can handle	Used when the amount of equipment needed to handle the incident is on scene. Ex: "San Luis, Battalion 3412 can handle with units at scene".
Call _____ by phone	Self explanatory
Copy, copies	Used to acknowledge

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Plain Language	Meaning or Usage
	message received. Unit radio ID must also be used. Ex: "Engine 2563 copies".
Disregard last message	Self explanatory.
Emergency traffic	Term used to gain control of a radio frequency to report an emergency. All other radio users will refrain from using that frequency until cleared for use by a dispatcher or incident commander.
Emergency traffic only	Used by radio users to confine all radio traffic to an emergency in progress or a new incident.
En route	Normally used by administrative or staff personnel to designate destination. En route is not a substitute for responding.
Fire under control	Used by the fire department to indicate that a fire is no longer increasing in size or complexity and no additional resources are required to extinguish it.
In quarters, with station name or number	Used to indicate that a unit is in a station. Ex: "Oroville, Engine 2176 in quarters, Jarbo Gap Station".
In service	Indicates the unit is

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Plain Language	Meaning or Usage
	operating, but not in response to a dispatch. Ex: "San Andreas, Engine 4460, in service, fire prevention inspections".
Is _____ available for a phone call?	Self explanatory.
Loud and clear	A signal report describing signal strength and readability
Negative	No.
Out of service	Indicates unit is out of service. When the unit is back in service a phrase like the following example should be used: Ex: "Redding, Engine 2460, out of service, [give reason] [provide duration]."
Repeat	Used to ask for a transmission to be spoken again.
Report on conditions	Used by the fire department for a unit (usually the first arriving) to describe the incident in a concise manner, allowing other responders and dispatch to comprehend the incident.
Respond, Responding	Used during dispatch to direct units to proceed to an incident or to refer to units proceeding to an incident.

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Plain Language	Meaning or Usage
	Ex: "Engine 3365, respond..." or "St. Helena, Engine 1475 responding."
Resume normal [radio] traffic	Self explanatory.
Return to _____	Normally used to direct units that are available to a station or other location.
Stand by	Self explanatory.
Stop transmitting	Self explanatory.
Uncovered	Indicates a unit is not in service, because there are no personnel to operate it.
Unreadable	Used when signal received is not clear. Try to add the specific trouble. Ex: "Unreadable, background noise."
Vehicle registration check	Self explanatory.
Weather	Self explanatory.
What is your location?	Self explanatory.

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Standard Phonetic Alphabet

Character	International Phonetic
A	Alpha
B	Bravo
C	Charlie
D	Delta
E	Echo
F	Foxtrot
G	Golf
H	Hotel
I	India
J	Juliet
K	Kilo
L	Lima
M	Mike
N	November
O	Oscar
P	Papa
Q	Quebec
R	Romeo
S	Sierra
T	Tango
U	Uniform
V	Victor
W	Whiskey
X	X-ray
Y	Yankee
Z	Zulu

Reference Materials

Reference Sources

- SAFECOM. <http://www.safecomprogram.gov>
The *National Emergency Communications Plan* (NECP) is a strategic plan that sets goals and identifies key national priorities to enhance governance, planning, technology, training and exercises, and disaster communications capabilities. The NECP provides recommendations, including milestones, to help emergency response providers and relevant government officials make measurable improvements in emergency communications over the next three years.
- National Public Safety Telecommunications Council (NPSTC). <http://www.npstc.org>
The *National Interoperability Field Operations Guide* (NIFOG) is a technical reference for emergency communications planning and for radio technicians responsible for radios that will be used in disaster response. The NIFOG includes rules and regulations for use of nationwide and other interoperability channels, tables of frequencies and standard channel names, and other reference material; formatted as a pocket-sized guide for radio technicians to carry with them.
<http://www.safecomprogram.gov/SAFECOM/nifog>
- Federal Emergency Management Agency (FEMA). <http://www.fema.gov>

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The Department of Homeland Security *Target Capability List* (TCL describes the capabilities related to the four homeland security mission areas: Prevent, Protect, Respond, and Recover. It defines and provides the basis for assessing preparedness. It also establishes national guidance for preparing the Nation for major all-hazards events, such as those defined by the National Planning Scenarios.

- NIMS Integration Center.

<http://www.fema.gov/emergency/nims/>

The *National Incident Management System* (NIMS) provides a systematic, proactive approach to guide departments and agencies at all levels of government, nongovernmental organizations, and the private sector to work seamlessly to prevent, protect against, respond to, recover from, and mitigate the effects of incidents, regardless of cause, size, location, or complexity, in order to reduce the loss of life and property and harm to the environment.

- Virginia.

www.vahs.virginia.gov/initiatives/interoperability

The *Virginia Statewide Communications Interoperability Plan* (SCIP) is a strategic plan designed to provide a framework for the Commonwealth to identify strategic initiatives intended to enhance emergency communications interoperability throughout the Commonwealth . Virginia has an approved SCIP that addresses designated critical elements for Commonwealth wide interoperability and a process to frequently

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update the SCIP as progress is made and new initiatives emerge.

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Incident Command System (ICS) Communication Forms

This appendix contains forms for incident command system (ICS) planning. For your convenience, two versions of the ICS 201 Form are included (TICP version and FEMA version). Due to the size of this document, these forms are not functional as is. If you don't have these forms available for your use, they can be found at the following website:

http://training.fema.gov/EMIWeb/IS/ICSResource/ICSResCntr_Forms.htm

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ICS 205

INCIDENT RADIO COMMUNICATIONS PLAN		1. Incident Name			2. Date / Time Prepared		3. Date / Time Prepared		
4. Basic Radio Channel Utilization									
Ch #	Function	Channel Name / Trunked Radio System Talk Group	Assignment	Rx Freq N or W	Rx Tone / NAC	Tx Freq N or W	Tx Tone / NAC	Mode	Remarks
1									
2									
3									
4									
5									
6									
5. Prepared by (Communications Unit)					Incident Location County/Commonwealth Lat/Long				

The convention calls for frequency lists to show four digits after the decimal place, followed by either an "N" or a "W", depending on whether the frequency is narrow or wide band. Mode refers to either "A" or "D" indicating analog or digital (Project 25)

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**Instructions for Completing the Incident Radio
Communications Plan (ICS 205 Form)**

ITEM #	ITEM TITLE	INSTRUCTIONS
1.	Incident Name	Print the name assigned to the incident.
2.	Date/Time Prepared	Enter date (month, day, year) and time prepared (24-hour clock).
3.	Operational Period Date/Time	Enter the date and time. Interval for which the Radio Communications Plan applies. Record the start time and end time and include date(s).
4.	Basic Radio Channel Utilization System/Cache	Enter the radio cache system(s) assigned and used on the incident (e.g., Boise Cache, FIREARMS, Region 5 Emergency Cache, etc).
	Channel Number	Enter the radio channel numbers assigned.
	Function	Enter the function each channel number is assigned (i.e., command, support, division tactical, and ground-to-air).
	Frequency	Enter the radio frequency tone number assigned to each specified function (e.g., 153.4000).
	Assignment	Enter the ICS organization assigned to each of the designated frequencies (e.g., Branch I, Division A).
	Remarks	This section should include

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		narrative information regarding special situations
5.	Prepared By	Enter the name of the Communications Unit Leader preparing the form.

Purpose: The Incident Radio Communications Plan provides in one location information on all radio frequencies assignments for each operational period. The plan is a summary of information obtained from the Radio Requirement Worksheet (ICS Form 216) and the Radio Frequency Assignment Worksheet (ICS Form 217). Information from the Radio Communications Plan on frequency assignment is normally placed on the appropriate Assignment List (ICS Form 204).

Preparation: The Incident Radio Communications Plan is prepared by the Communications Unit Leader and given to the Planning Section Chief.

Distribution: The Incident Radio Communications Plan is duplicated and given to all recipients of the Incident Objectives form including the Incident Communications Center. Information from the plan is placed on Assignment List.

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ICS 205A

Communications List (ICS 205A)

1. INCIDENT Name:		2. Operational Period:		Date From:	Date To:
				Time From:	Time To:
3. Basic Local Communications Information					
Incident Assigned Position		Name (Alphabetized)		Method(s) of Contact (phone, pager, cell, etc)	
4. Prepared by: Name: _____ Position/ Title: _____ Sgnature _____					
ICS 205A	IA Page ____	Date/ Time:			

**Instructions for Completing the Communications List
(ICS 205A Form)**

ITEM #	ITEM TITLE	INSTRUCTIONS
1.	Incident Name	Enter the name assigned to the incident.
2.	Operational Period <ul style="list-style-type: none"> • Date and Time From • Date and Time To 	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
3.	Basic Local Communications Information	Enter the communications methods assigned and used for personnel by their assigned ICS position.
	<ul style="list-style-type: none"> • Incident Assigned Position 	Enter the ICS organizational assignment
	<ul style="list-style-type: none"> • Name 	Enter the name of the assigned person
	<ul style="list-style-type: none"> • Method(s) of Contact (phone, pager, cell, etc) 	For each assignment, enter the radio frequency and contact number(s) to include the area code, etc. If applicable, include the vehicle license or ID number assigned to the vehicle for the incident (e.g., HAZMAT1, etc).
4.	Prepared by <ul style="list-style-type: none"> • Name • Position/Title 	Enter the name, ICS position, and signature of the person preparing

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	<ul style="list-style-type: none">• Signature• Date/Time	the form. Enter date (month/day/year) and time prepared (24-hour clock).
	Assignment	Enter the ICS organization assigned to each of the designated frequencies (e.g., Branch I, Division A).
	Remarks	This section should include narrative information regarding special situations
5.	Prepared By	Enter the name of the Communications Unit Leader preparing the form.

Purpose: The Communications List (ICS 205A) records methods of contact for incident personnel. While the Incident Radio Communications Plan (ICS 205) is used to provide information on all radio frequencies down to the Division/Group level, the ICS 205A indicates all methods of contact for personnel assigned to the incident (radio frequencies, phone numbers, pager numbers, etc.), and functions as an incident directory.

Preparation: The ICS 205A can be filled out during check-in and is maintained and distributed by Communications Unit personnel. This form should be updated each operational period.

Distribution: The ICS 205A is distributed within the ICS organization by the Communications Unit, and posted as necessary. All completed original forms must be given to the Documentation Unit. If this form contains sensitive information such as cell phone numbers, it should be clearly marked in the header that it contains sensitive information and is not for public release.

Notes:

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- The ICS 205A is an optional part of the Incident Action Plan (IAP)
- This optional form is used in conjunction with the ICS 205.
- If additional pages are needed, use a blank ICS 205A and repaginate as needed.

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ICS Form 217A

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS 217A							Frequency Band	Description		
	Channel Configuration	Channel Name / Trunked Radio System Talk Group	Eligible Users / Assignments	Rx Freq N or W	Rx Tone / NAC	Tx Freq N or W	Tx Tone / NAC	Mode A, D, or M	Remarks	
1										
2										
3										
4										

The convention calls for frequency lists to show four digits after the decimal place, followed by either an “N” or a “W”, depending on whether the frequency is narrow or wide band. Mode refers to either “A” or “D” indicating analog or digital (e.g. Project 25). All channels are shown as if programmed in a portable or mobile radio. Repeater and base stations must be programmed with the Rx and Tx reversed.

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SAMPLE ICS 217A

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS 217A					Frequency Band		Description	
Channel Configuration	Channel Name / Trunked Radio System Talk Group	Eligible Users / Assignments	Rx Freq N or W	Rx Tone / NAC	Tx Freq N or W	Tx Tone / NAC	Mode A, D, or M	Remarks
List – Identify Tactical Nets								
		Operations						
List – Identify Command Nets								
		Command & General Staff						
List – Identify Air-to-Ground Nets								
		Air Ops & Ops						
List – Identify Dispatch Nets								

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		Initial Attack							
List – Identify Support Nets									
		Logistics							

The convention calls for frequency lists to show four digits after the decimal place, followed by either an “N” or a “W”, depending on whether the frequency is narrow or wide band. Mode refers to either “A” or “D” indicating analog or digital (e.g. Project 25). All channels are shown as if programmed in a portable or mobile radio. Repeater and base stations must be programmed with the Rx and Tx reversed.

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**Instructions for Completing the Radio Frequency
Assignment Worksheet (ICS 217 Form)**

ITEM #	ITEM TITLE	INSTRUCTIONS
1.	Incident Name	Print the name assigned to the incident.
2.	Date	Enter date (month, day, year) prepared.
3.	Operational Period	Enter the time interval for which the assignment applies. Record the start date/time and end date/time (e.g., 9/17/96-0600 to 9/18/96-0600).
4.	Incident Organization	List frequencies allocated for each channel for each organizational element activated, record the number of radios required to perform the designated function on the specified frequency.
5.	Radio Data	For each radio cache and frequency assigned, record the associated function. Functional assignment for: Command Support Division tactical Ground-to-air
6.	Agency	List the frequencies for each major agency assigned to the incident. Also list the function and channel number assigned.
7.	Total Radios Required	Total each column. This provides the number of radios required by each organizational unit. Also total each row which provides the number of radios using each available frequency.
8.	Prepare	Enter the name and position of the person

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	d By	completing the worksheet.
--	------	---------------------------

Purpose: The Radio Frequency Assignment Worksheet is used by the Communications Unit Leader to assist in determining frequency allocation.

Preparation: Cache radio frequencies available to the incident are listed on the form. Major agency frequencies assigned to the incident should be added to the bottom of the worksheet.

Distribution: The worksheet, prepared by the Communications Unit, is for internal use.

Glossary and Terms

Cache radios Also known as “swapped radios,” refer to maintaining a cache of standby radios that can be deployed to support regional incidents. These radios may be from a regional cache or from a participating agency. These radios allow all responders to use common, compatible equipment during an incident.

CAM Communication Assets Mapping

CAS Communication Assets Survey

CASM Communication Assets Survey and Mapping

COMC Communications Coordinator

COML Communications Unit Leader

COMT Incident Communications Technician

CTCSS Continuous Tone-Coded Squelch System

DHS Department of Homeland Security

EOC Emergency Operations Center

Gateway Systems Interconnect channels of disparate systems (whether on different frequency bands or radio operating modes), allowing first responders using their existing radios and channels to be interconnected with the channels of other users outside of their agency. Dispatch consoles that are able to create patches will also be captured as gateways.

FEMA Federal Emergency Management Agency

FOG Field Operations Guide

IC Incident Commander

ICC Incident Communications Center

ICP Incident Command Post

ICS Incident Command System

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INCM	Incident Communications Center Manager
Interoperability	The ability to communicate between agencies that utilize disparate radio systems and other interoperability methods such as mutual aid channels, gateways, dispatch centers and radio caches. Interoperable resources are defined as shared systems, shared channels, gateways, and radio caches
Inter-System Shared Channels	Refers to common frequencies/talk groups established and programmed into radios to provide interoperable communications among agencies using <i>different</i> radio systems. "Channel," in this context, refers to the name of a common frequency/talk group visually displayed on a user's radio.
Intra-System Shared Channels	Refer to common frequencies/talk groups established and programmed into radios to provide interoperable communications among agencies using the <i>same</i> shared radio system. "Channel," in this context, refers to the name of a common frequency/talk group visually displayed on a user's radio.
MACS	Multiagency Coordination System

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Mobile Communications Units (MCUs)	Also known as a Mobile Communications Centers (MCCs), Mobile Communications Vehicle (MCV), or Mobile EOCs) refers to any vehicular asset that can be deployed to provide or supplement communications capabilities in an incident area. Examples of the types of communications devices an MCU can house are: subscriber and base station radios of various frequency bands, gateway devices, satellite phones, wireless computer networks, video broadcasting/receiving equipment, etc. Typically these communications devices are permanently located or stored in the MCUs when not used. The MCU should also be able to temporarily provide the electrical power required to operate the communications devices.
MOUs	Memoranda of Understanding
NAC	Network Access Code
NECP	National Emergency Communications Plan
NIFC	National Interagency Fire Center
NIMS	National Incident Management System
NRF	National Response Framework
RADO	Radio Operator
Shared Systems	Refer to a single radio system used to provide service to several public safety agencies.
VEOC	Commonwealth of Virginia Emergency Operations Center EOC
SOP	Standard Operating Procedure
THSP	Technical Specialist
TICP	Tactical Interoperable Communications Plan
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UACSC

Urban Area Communications Steering
Committee

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Web Site Links

American Radio Relay League (ARRL): www.arrl.org
APCO International: www.apcointl.org
CASM: <https://franz.spawar.navy.mil>
DHS OEC:
www.dhs.gov/xabout/structure/gc_1189774174005.shtm
EMAC: www.emacweb.org
FCC Enforcement Bureau: www.fcc.gov/eb
FCC Public Safety & Homeland Security Bureau:
www.fcc.gov/pshs
FCC Special Temporary Authority (STA):
www.fcc.gov/pshs/services/sta.html
FCC ULS: wireless.fcc.gov/uls
FEMA: www.fema.gov
Government Emergency Telecommunications Service (GETS):
gets.ncs.gov
Homeland Security Information Network: www.hsin.gov
Lessons Learned Information-sharing: www.llis.gov
National Emergency Communications Plan:
http://www.dhs.gov/xlibrary/assets/national_emergency_communications_plan.pdf
National Interagency Fire Center (NIFC): www.nifc.gov
National Interagency Incident Communications:
www.fs.fed.us/fire/niicd
National Interoperability Information Exchange (NIIX):
www.niix.org
National Regional Planning Council (NRPC) www.nrpc.us
National Response Framework Resource Center
<http://www.fema.gov/emergency/nrf/>
National Telecommunications & Information Admin (NTIA):
<http://www.ntia.doc.gov>
National Wildfire Coordinating Group (NWCG): www.nwcg.gov
NIFOG: www.safecomprogram.gov/SAFECOM/nifog
NIMS Information: www.fema.gov/emergency/nims
NPSTC: www.npstc.org

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Radio Reference: www.radioreference.com
SAFECOM: www.safecomprogram.gov
Wildland Fire Communications: www.fireradios.net
Wireless Priority Service (WPS): wps.ncs.gov

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